A Small Business Guide to

Environmental Management

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I

Introduction

"The great thing in this world is not so much where we stand as in what direction we are moving."

Oliver Wendell Holmes

A. Environmental concern is here to stay

Public concern for the environment has risen dramatically in recent years and there is every indication that it will remain high in the future. Three trends illustrate this point, as follows:

- The environment has become a priority. Individuals from all sectors of society, including business and industry, are advocating better environmental protection.
- Politicians and government leaders have responded with major environmental commitments. These commitments will likely result in new environmental legislation and enforcement that make business and consumers more aware of the environmental consequences of their actions.
- Environmental issues are now being taught to children in the primary and secondary school system. Their eventual emergence as decision makers in society will ensure that future environmental matters receive a high level of attention.

Another trend, at international, national and regional policy levels, is to consider the long term effects and economic costs associated with the environmental degradation of the planet. The action called for at this level is not limited to measures designed to reduce waste and otherwise turn potential environmental problems into business opportunities and profit centers, although these constitute the first and essential step by businesses toward a total solution, but extend to all facets of Canadian life: cultural and societal values, macro- and regional economic policies, social development, political decision-making, and all other areas of development which impact on our ability to meet the socio-economic needs of the present without compromising the ability of future generations to meet their own social and economic needs. Consequently, to achieve such "sustainable development", according to the trend setters, it is necessary to achieve a fundamental change in basic human beliefs and attitudes in regard to all aspects of our physical environment.

In view of these trends, it is becoming increasingly important for companies to build environmental responsibility into their daily activities. Indeed, many companies already recognize the environment as the single most important issue affecting their business over the coming decade. Environmental pressures from investors, customers, employees, regulators, labour unions, and the public represent a strong social and economic force that business cannot ignore. Demand for environment-related products, services, and technologies is growing rapidly but the window of opportunity is narrow for companies that wish to take a leadership position in the environment industry. The biggest opportunity for business in the coming years will be to turn its environmental endeavours into a firm-wide competitiveness strategy.

While many have made the commitment, it is often difficult to translate broad environmental concerns into practical corporate action. It is for this reason that the Canadian Chamber of Commerce, through its FOCUS 2000 Program, and the National Round Table on Environment and Economy (NRTEE) have joined forces to prepare this document. It is also for this reason that Industry, Science and Technology Canada (ISTC) has agreed to contribute to this manual.

A major role of ISTC is to assist in efforts to improve the competitiveness of Canadian businesses. A primary goal of the Canadian Chamber of Commerce FOCUS 2000 Program is to help small and medium-sized Canadian firms improve their competitiveness both domestically and internationally. Many companies are finding that by improving their environmental performance, they also improve their economic performance. A primary goal of the NRTEE is to initiate dialogue on how to integrate environmental and economic issues in Canada. This workbook provides the framework and operational tools to translate that dialogue into concrete action for the environment.

B. This workbook is an operational tool

This workbook is an action-oriented planning guide designed to help Canadian companies put environmental responsibility into practice. It is relevant to small and medium-sized firms across industry sectors. It presents a broad, action planning framework and works through each component of the framework in a straightforward, step-by-step manner.

This workbook builds on the Canadian Chamber of Commerce small-business guide entitled *Achieving Environmental Excellence: A Handbook for Canadian Business*. This earlier document presented a strategic overview of the many business opportunities resulting from changing consumer attitudes toward the environment. The current *Small Business Guide to Environmental Program Management* translates those strategies into specific action steps at the operational level.

The information is presented in a workbook format for easy reference and understanding. Where possible, tables, diagrams, and bullets are used to minimize the volume of written material.

C. How to use this workbook

The action steps outlined in this small-business guide are meant simply as guidelines and can be readily adapted to suit the particular needs of your company. It contains exercises which can be used as worksheets to prepare your environmental action plan. Although this workbook can be used on its own, it is recommended that operators participate in the "Environmental Management" workshop which is based on the content of the current document. The exercises herein can then be used, with assistance from the facilitator, to begin to prepare your action plan.

D. Note to very small businesses

If you operate a business which employs a few individuals only, looking through this document you may feel at first glance that part of the process described is too comprehensive for your firm. This process can easily be simplified further to fit your needs. The important thing is to know what has to be done and the factors that will influence planning and implementation.

For instance, it may not be possible for your business to dedicate a full-time "champion" or coordinator to the project. Bear in mind that this process need not be implemented all at once. The human resources needed to coordinate the project may be distributed among several employees and allocated over a longer time period.

Moreover, you may find it useful to participate in a FOCUS 2000 Environmental Management workshop organized especially for businesses of your size. With a homogeneous group, the facilitator will be able to make the minor adjustments needed to closely fit the workshop content to your operation, and help you start your own in-house program.

II

Framework For Action

"There are many ways of going forward, but only one way of standing still."

Franklin D. Roosevelt

A. Seven steps to environmental success

While there are literally hundreds of ways to introduce environmental improvements to your company, seven common sequential steps can be identified. These steps are illustrated in Exhibit II-1 and described briefly in this chapter of the workbook. Chapters III through IX lead you through each step and provide practical, fill-in-the-blank exercises.

1. Develop an environmental policy

The first step is to document your environmental "mission" in a brief, clearly-worded policy statement. The statement demonstrates your firm's corporate commitment to the environment and legitimizes subsequent tasks. The environmental policy should clearly state your position on the environment, your environmental achievements, and guidelines for responsible action by your employees.

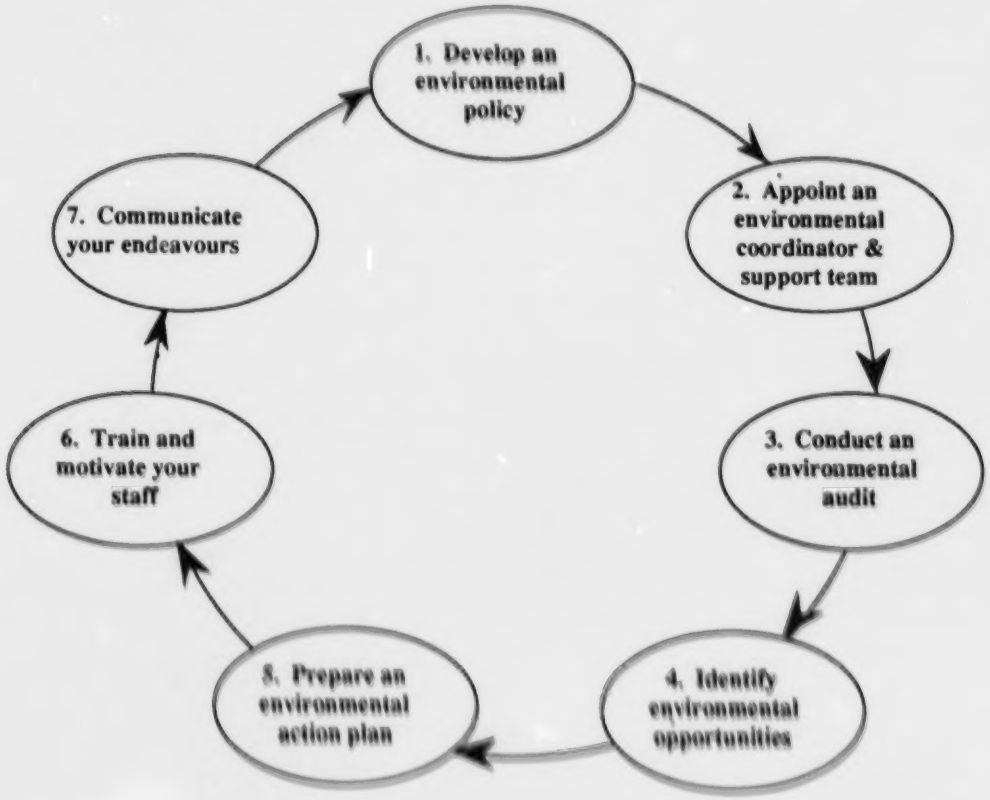
2. Appoint an Environmental Coordinator and supporting team

To ensure that the company adheres to its environmental policy, you will need to appoint a senior level Environmental Coordinator. You should also assemble an Environmental Team that will support the Environmental Coordinator. The best Environmental Team includes representatives from each major department and geographic location within the firm.

3. Conduct an environmental audit

The next step is to conduct a review of your operations to determine the state of the environment in your firm. The environmental audit is used to ensure compliance with environmental laws, evaluate the effectiveness of environmental management systems, outline ways to minimize waste and conserve energy, and identify possible liabilities with buildings and property in real estate transactions. As a monitoring tool, the audit should be documented and repeated on a periodic basis.

Exhibit II-1
Seven steps to corporate environmental excellence


1. Develop an environmental policy
2. Appoint an environmental coordinator & support team
3. Conduct an environmental audit
4. Identify environmental opportunities
5. Prepare an environmental action plan
6. Train and motivate your staff
7. Communicate your endeavours

4. Identify environmental opportunities

In addition to examining your company's internal environmental performance, it is important to examine external marketing issues and to identify potential opportunities. It may be possible to broaden your product or service line, or to reposition your existing products and services to satisfy the environmentally conscious customer.

5. Prepare an environmental action plan

Based on the results of the environment audit, you need to develop a detailed action plan. This plan outlines specific tasks to be completed as well as associated costs, time frames, and responsibilities to ensure completion. It is important that the tasks are assigned to staff members with the authority, motivation, and resources to successfully complete the job.

6. Train and motivate your staff

Your staff must be informed about the environmental policy and action plan and be actively involved in developing and updating it. While senior management provides the general direction on environ-

mental initiatives, your staff will be largely responsible for implementation. If staff participate in developing the plan, they are much more likely to carry it out. Once it is in place, employees must be trained, and given the tools to make environmental improvements in their respective areas.

7. Communicate your endeavours

It is important to communicate your environmental endeavours externally, both to your customers and the general public. As long as you are modest about your efforts and accurate in your claims, your communications will significantly improve your public image and customer loyalty.

B. Achieving environmental success is a continuous process

Because environmental issues are changing rapidly, it is not enough simply to complete the seven steps outlined above. As the diagram illustrates, you must continually repeat the cycle. Only in this manner will you be truly incorporating environmental responsibility into your corporate decision making structure.

These seven steps form the underlying framework by which any firm, regardless of industry, can improve its environmental performance and reap the rewards. We have therefore structured this workbook such that each of the remaining chapters corresponds to a separate work step.

C. Benefits of a corporate greening strategy

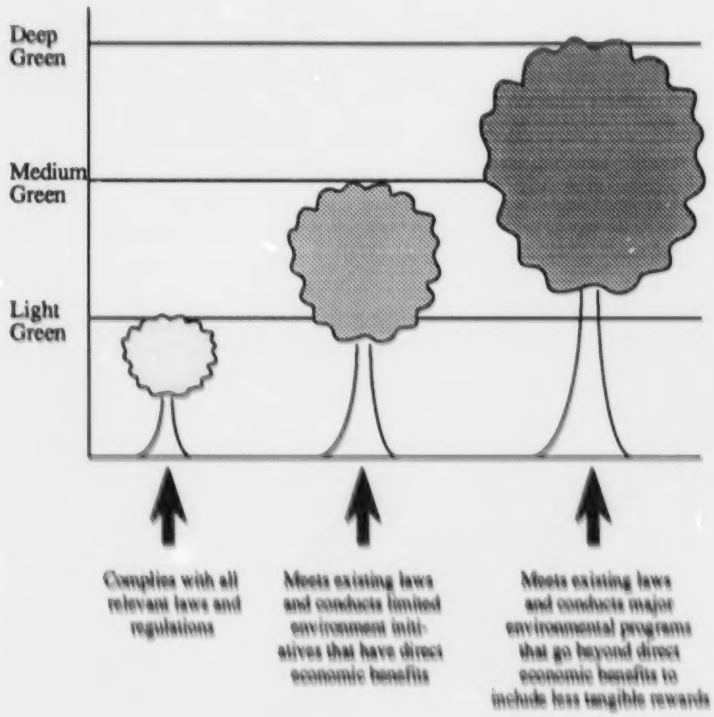
Initiating a corporate greening strategy for your organization will produce many direct and indirect benefits. In particular, it may:

- Improve your corporate image.
- Increase customer loyalty.
- Boost staff loyalty and commitment to your firm.
- Increase staff productivity.
- Reduce staff turnover.
- Boost sales of your products and services.
- Help identify future market opportunities.
- Improve the efficiency of your processes.
- Reduce operating expenses.
- Reduce risk of liability for environmental damage.
- Minimize your impact on the environment.
- Attract highly qualified and motivated staff.
- Satisfy investor and lender environmental liability concerns.

D. Environmental commitment improves competitiveness

While virtually all companies agree that there are benefits to initiating corporate greening strategies, there is less agreement about the point at which the costs outweigh the benefits. In Exhibit II-2, we present three levels of corporate environmental commitment.

Exhibit II-2
Spectrum of environmental commitment: where does your company fit?


Deep Green
Medium Green
Light Green
Complies with all relevant laws and regulations
Meets existing laws and conducts limited environment initiatives that have direct economic benefits
Meets existing laws and conducts major environmental programs that go beyond direct economic benefits to include less tangible rewards

There is a growing body of evidence that firms that follow the "deep green" path will reap the greatest rewards. Business is quickly realizing that many of the most financially successful companies also have the best record of environmental performance. Firms in the "light green" and "medium green" categories will simply not be taken seriously by a society that is becoming increasingly environmentally conscious.

If environmental experts are correct in their prediction that we have only one generation left to make the transition to a sustainable planet, business cannot be satisfied with making small changes. In the long run, only the changes that count are going to improve the competitiveness of your firm.

Exercise II-1: How green is my company?

To evaluate the current environmental performance of your company, complete the following questionnaire. For each question, assign a number according to the following scoring system:

0 - No action taken
1 - Plans have been initiated
2 - Plans are complete but no action has been taken
3 - Some tasks have been carried out
4 - Complete action has been taken

The questionnaire contains 25 questions for a maximum score of 100.

1. Have you prepared an environmental policy statement? _____
2. Is your firm committed to strongly supporting the environment? _____
3. Have you incorporated environmental concerns into your accounting and financial management processes? _____
4. Have you appointed a designated person to coordinate and oversee your environmental endeavours? _____
5. Does your firm have an environmental committee to monitor your progress on environmental matters? _____
6. Have you established a means of determining the environmental impacts of your organization? _____
7. Do you look for ways to reduce or eliminate environmental risks? _____
8. Do you emphasize preventative measures versus "end-of-pipe" solutions in dealing with environmental challenges? _____
9. Is management kept informed of the results of any environmental monitoring programs? _____
10. Have you reviewed your products or services to see if they could be made more environmentally sound? _____
11. Have you developed any new products or services that have an environmental orientation? _____
12. Do you carefully consider environmental issues when analyzing potential acquisitions? _____
13. Do you monitor your suppliers, vendors, and contractors to ensure that they are operating in an environmentally sound manner? _____
14. Have you developed goals, objectives, and strategies to improve your environmental performance? _____

15. Do you have detailed procedures in place to respond to an environmental crisis, should it occur? _____

16. Do you instruct your staff on environmental issues? _____

17. Do you recognize and reward your staff for addressing environmental problems and making environmental improvements? _____

18. Have you developed working relationships with community members such as government agencies, industry associations, and environmental groups on environmental matters? _____

19. Do you have a program to communicate your environmental achievements to your staff, your customers, and the public? _____

20. Do you stay abreast of environmental trends and legislation? _____

21. Do you consider future, tougher laws when you make current production and investment decisions? _____

22. Do you take a long-term view when considering the "pay back" of your environmental endeavours? _____

23. Do you obtain routine feedback from your customers and the public about your environmental endeavours? _____

24. Do you meet or exceed all existing environmental laws and regulations? _____

25. Do you treat environmental performance as a way of improving your firm's overall competitive advantage? _____

TOTAL SCORE _____

How well did you do? Evaluate your score against the following benchmarks.

Score	Rating	Comment
80-100	Excellent	Please proceed to the Environmental Hall of Fame
65-79	Good	You are making progress, keep it up.
50-64	Fair	You have recognized the environment as a major concern but you still have much to do.
0-49	Poor	You are an environmental "dinosaur". Action must be taken soon to avoid extinction.

III

Developing An Environmental Policy

"Corporations that think they can drag their heels indefinitely on environmental problems should be advised: society won't tolerate it ... Companies with real sensitivity and environmental commitment will be there to supply your customers after you're gone."

E.S. Woolard
Chairman of Dupont

A. What is an environmental policy?

An environmental policy is a well formulated, succinct document that outlines the guiding philosophy and commitment of your company with respect to the environment. It may be contained on a single page and should clearly state your firm's position on the environment, as well as defining your primary environmental objectives. It should provide clear direction for future activities, with special reference to the major environmental issues affecting your firm or industry. The policy may also include previous environmental accomplishments and offer guidelines for responsible actions by your employees. Even very small businesses should develop a short but articulate policy statement.

B. Defining your objectives is key

The first step in establishing an environmental policy is to define your objectives. These will be determined, to some degree, by the type of business in which you are engaged. Possible objectives for preparing an environmental policy may be to:

- To improve our public image.
- To provide guiding principles to our employees concerning their activities.
- To set environmental standards by which our suppliers and contractors must abide.
- To initiate a corporate greening process based on sound research and analysis.

C. Identifying major environmental issues affecting your firm

Before drafting an environmental policy you should identify major environmental issues that are specific to your company. Once the issues have been identified, it is necessary to determine your firm's position with respect to each. Communication among all staff ... and when applicable among all levels of staff ... will permit consensus on the issues identified.

Exhibit III-1 presents a sample list of environmental issues together with sample company policy positions.

Exhibit III-1
Sample environmental issues and company position

Environmental Issue	Policy Position
Air	To work to exceed all air emissions standards.
Water	To work to eliminate effluents from waste water.
Waste	To work to reduce solid waste by 50% by the year 2000.
Energy	To implement a comprehensive energy conservation program.
Natural Resources	To work to reduce our consumption of both renewable and especially non-renewable natural resources.

Other environmental issues that may be relevant to some firms include:.

- **Global warming**--The increase in the earth's temperature due to the release of certain gases such as carbon dioxide and methane.
- **Ozone layer depletion**—The depletion of a protection layer of the earth's atmosphere due to the release of propellants and refrigerants such as chlorofluorocarbons.
- **Acid rain**—The deposition of acid substances on land and water systems due to the release of sulphur and nitrogen oxides from the burning of fossil fuels.

Exercise III-1: Listing the major issues and possible firm positions

After reviewing the sample environmental issues presented above, list the major issues relevant to your firm in the blank matrix shown below in Exhibit III-2. You may also want to record a possible firm position on each issue.

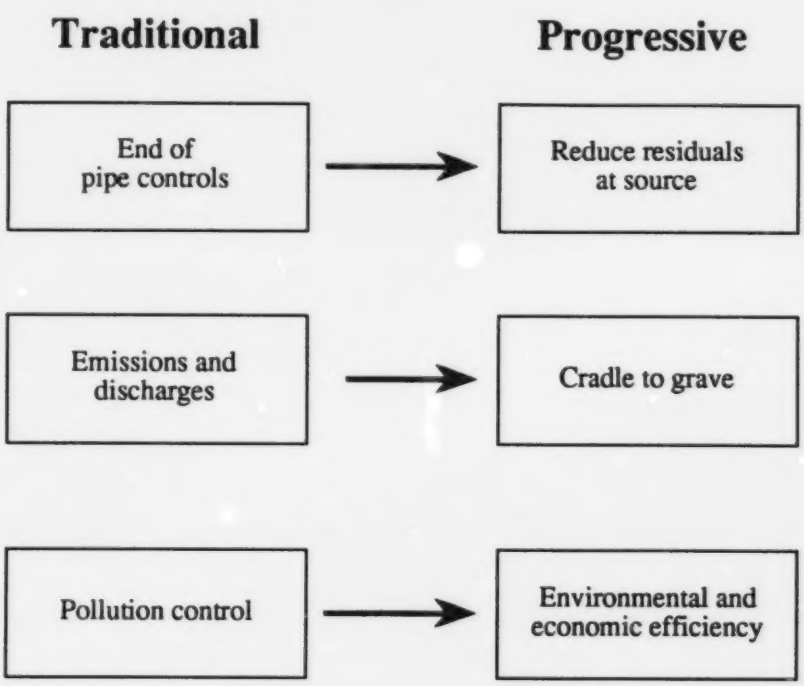
Exhibit III-2
Sample environmental issues and company position

Environmental Issue	Policy Position

D. Reviewing examples of environmental policies

To facilitate the process and to determine the positioning of potential competitors, it is helpful to collect and review samples of environmental policy statements developed by other companies. Sample policies could be gathered from a number of different industry sectors to provide a balanced view of alternatives. While one industry may take a traditional approach to a specific issue (e.g., public involvement in the decision making process), other industry sectors may adopt a more progressive and proactive approach to the same issue. The contrast between traditional and progressive approaches is illustrated in Exhibit III-3.

Exhibit III-3
Traditional versus progressive environmental management policies



Contact your industry association to obtain a sampling of environmental policies. The following are examples of objectives cited in various environmental policy statements:

- To be perceived as the most environmentally aware and active company in our industry or market.
- To operate all facilities in a manner that exceeds regulatory requirements whenever possible.
- To maintain the highest standards for the ongoing health and safety of our employees, our customers, the communities in which we operate and the environment.
- To incorporate environmental concerns in all corporate planning activities.
- To emphasize measures that prevent environmental damage rather than cleaning up pollution that has already occurred. (See Exhibit III-3)
- To minimize the environmental impact of operations.
- To improve the level of internal communication, education and/or consultation.
- To work with government in developing new regulations and legislation that affect the industry.

- To support environmental research and development.
- To aim to include environmental considerations in investment decisions.
- To expect similar standards to our own from supplier, vendors, and contractors.
- To take responsibility for our products and serve from a cradle-to-grave perspective.

An excellent example of an environmental policy is provided by the British Columbia Telephone Company. This policy is reproduced in Exhibit III-4, below.

Exhibit III-4
Environmental policy for British Columbia Telephone Company (BC Tel)

Recognizing that the environmental belongs to future generations, our commitment is to:

- Show leadership in dealing with our environmental issues.
- Integrate environmental protection and improvements into our plans and operations.
- Meet or exceed federal, provincial and municipal environmental standards.
- Deal with environmental issues at the time of purchase in preference to the time of disposal, utilizing our environmental purchasing policy.
- Encourage employees to be innovative and action-oriented in identifying and addressing our environmental challenges.
- Work together with our employees, our customers and government on environmental issues related to our business.
- Share our progress with our employees, the public and the business community, to increase environmental awareness and to share environmental solutions.

Exercise III-2: Outlining your primary objectives

Using the examples provided above and your own company experience, prepare a list of the primary objectives of your environmental policy. Remember to take the major issues affecting your firm into account.

Objectives:

_____

_____

_____

_____

_____

_____

E. Pointers on preparing your environmental policy

Policy statements that include a rationale for each objective, as well as action plans, are most effective. It may be helpful to keep the following pointers in mind when drafting your environmental policy:

- Be pro-active, not reactive—pro-active policy will help mitigate attacks from government, environmental groups and media.
- Be action-oriented with clearly defined goals—action oriented policy goes beyond simply issuing a policy statement, and can improve the credibility and public perception of your company.
- Involve all your staff—staff who participate in the preparation of an environmental policy are more likely to be commited to it.
- Include clear, concise statements of your firm's position on the environment—avoid generalities and motherhood statements that promote ambiguity and indicate a lack of commitment by your firm.
- Follow up with a concrete action plan for management and all employees—the greatest impact of an environmental policy will be seen if there are concrete action plans in place, against which progress can be measured. This is discussed in greater detail in Chapter VII.

IV

Assembling Your Environmental Team

"Never doubt that a small group of thoughtful, committed individuals can change the world. Indeed, it's the only thing that ever has."

Margaret Mead

A. Appointing an Environmental Coordinator

The first step in assembling an Environmental Team is to appoint an Environmental Coordinator. The primary role of this individual is to ensure that environmental initiatives are introduced and maintained in a coordinated and interdisciplinary manner throughout the company.

Depending on the size and financial position of your organization, you may wish to assign the position to an existing staff member who maintains other duties, or hire a new employee to work solely on environmental initiatives for the firm.

This individual should have sufficient authority and resources to make decisions quickly and efficiently. Specific characteristics and background experience needed will vary with primary duties, as described below.

Although titles such as Environment Vice-President, Environmental Affairs Manager, Environmental Director or Environmental Coordinator may be used, the duties are generally the same. We will use the term "Environmental Coordinator" throughout this workbook. Typical duties of the Environmental Coordinator are to:

- Participate on internal and external environment-related committees.
- Make presentations to external audiences about the company's activities.
- Participate in instructing staff on environmental issues.
- Oversee environmental audits.
- Prepare an environmental action plan based on feedback from the Environmental Team, when applicable, and information highlighted by the environmental audit.
- Coordinate consultant activities.
- Review policies, practices, and procedures.
- Work with operations staff to modify products or services to make them more environmentally sound.

- Monitor and report environmental achievements on a routine basis.

As can be observed, these duties are much broader than those associated with the Environmental "Safety Officer" appointed by some firms to ensure compliance with existing laws and regulations.

B. Selection criteria for an Environmental Coordinator

The criteria used to select an Environmental Coordinator will vary with the primary duties of the position. These primary duties will be dependent on the size of the enterprise and on the major thrust of the firm's environmental policy and environmental action plan. Examples follow.

1. Handling publicity is a primary duty

The primary objective of a firm's environmental policy might be to market as many green products and services as possible and to attempt to establish a strong link between the green theme and the company name. This decision could require significant interaction between an Environmental Coordinator and the media. In such cases, the individual selected for the position should be placed at the senior management level of the company, should be well spoken and credible, and should be enthusiastic about taking on a very public role. Other assets would include a marketing background with a focus on new products and a strong and demonstrated commitment to the environment. In a small enterprise, the chief executive may want to take on the "publicity" function.

2. Technical improvements are the primary thrust

In some companies, the need to reduce emissions or introduce other environment-related technical measures may be the primary thrust of both the environmental policy and the environmental action plan. In this case, the Environmental Coordinator should have a good understanding of the technical issues facing the firm. Since contact with parties external to the company will likely be less important than managing the internal process of technical change, a middle management individual or other experienced, responsible employee with strong technical expertise may be the best choice. A strong commitment to the environment and a talent for innovation will still be important. The strong support of management will also be key to the successful implementation of any measure planned by the Environmental Coordinator.

3. Staff training is a key duty

In some companies, providing guidelines for responsible employee conduct and implementing programs to facilitate employee action may be a the primary objective an an environmental policy. In this case, the Environmental Coordinator should have experience in program design and implementation experience as well as training. Creativity, an outgoing personality and the ability to work as a part of a team will be important characteristics of the successful candidate. Small business operators may not have on staff individuals with the specialized knowledge and experience needed to expertly manage all the components of the environmental program. The Environmental Coordinator, in such cases, should have the ability ... and authority ... to get assistance from available local and regional sources such as local chambers of commerce, vertical trade associations, educational institutions, federal and provincial assistance programs, and consultants.

Exercise IV-1: Identifying Environmental Coordinator candidates

Thinking about the key objectives of your company's environmental policy, consider the likely primary role of an Environmental Coordinator in your firm. Use the space below to outline the key characteristics of a successful candidate.

Primary role of Environmental Coordinator:

_____

Key Characteristics:

_____

_____

_____

_____

_____

_____

C. Selecting the remaining team members

In a medium-size to large firm, the Environmental Coordinator will require the support of an action team. The team members should be selected from a cross section of departments within the firm. This is because every department has a role to play in solving environmental problems. Typical membership of an Environmental Team is shown in Exhibit IV-1.

Smaller businesses are not likely to be structured into so many distinct departments as shown in Exhibit IV-1. Nonetheless, all of the business functions listed are handled in some way or other. The Environmental Team, whether it is a team of one or a dozen, will have to take all these functional areas into account in implementing its mandate.

Exhibit IV-1
Membership of Environmental Team

Department	Reason For Being Included
Personnel Department	The environment affects all employees and they must be kept informed and encouraged to participate.
Marketing/ Communications Department	Your company can improve its image and profile by communicating its environmental endeavours.
Corporate Planning Department	Environmental initiatives must be incorporated into corporate decision making.
Production Department	Operational staff have major opportunities to reduce environmental impacts and innovate their products or services to make them more environmentally sound.
Finance/ Accounting Department	Sufficient financial resources must be allocated to implement environmental changes.
Maintenance Department	Maintenance staff have major control over waste reduction and energy or water conservation.
Purchasing Department	Many opportunities exist to reduce total purchases and switch to alternative products that are more kind to the environment.

If your business has several departments, it is wiser to settle for a less "well-rounded" team of committed individuals (e.g., two members from one department and none from another) than to impose an optimal participation mix of less eager people. But try to be sure you have at least one team member from each department directly affected by an environmental issue.

The purpose of the Environmental Team is to advise senior management on environmental issues and to support the Environmental Coordinator. Specifically, the duties of the team are to:

- Plan and coordinate the environmental audit.
- Develop the environmental action plan.

If the Environmental Team is limited to one Environmental Coordinator, this individual will likely have to rely on external sources of assistance, as indicated previously. Your local chamber of commerce or board of trade should be able to help you identify such sources available locally.

Exercise IV-2: Selecting the environmental team

Completing a matrix analysis is often a good way to identify which departments in your firm, if applicable, will be directly affected by an environmental issue. You should then attempt to select at least one team member from each department affected.

If your firm is structured into several departments, or if you are considering the establishment of a team, complete the matrix shown in Exhibit IV-2 by filling in the environmental issues important to your firm in the left hand column (these were identified in Chapter III, Exercise I). Looking across the matrix, identify which departments or parts of the operation you think will be directly affected by each issue.

When it comes to actually recruiting team members from these departments, remember that soliciting volunteers is generally preferable to making appointments.

D. Provide corporate support

To ensure the success of the Environmental Team, it is imperative that it be given a high degree of support from the top levels of your firm. This will create the necessary expectation among staff that the Environmental Coordinator or Committee has the authority and backing to produce significant and tangible results. Some ways that top management can demonstrate its support include the following:

- Provide detailed information about the purpose and objectives of the Environmental Team to all employees.
- Provide ongoing and active support to the Environmental Coordinator.
- Allocate sufficient resources to allow the Team to implement an adequate environmental action program and communicate its achievements internally and externally.

Exhibit IV-2
Business-environment matrix

Business Activity/ Environmental Issue	Human Resources	Marketing	Finance	Production	Strategic Management	Information Systems

- Place a high priority on quickly resolving conflicts between environmental and departmental or operational objectives.
- Recognize the achievements of the Environmental Team at every possible opportunity.

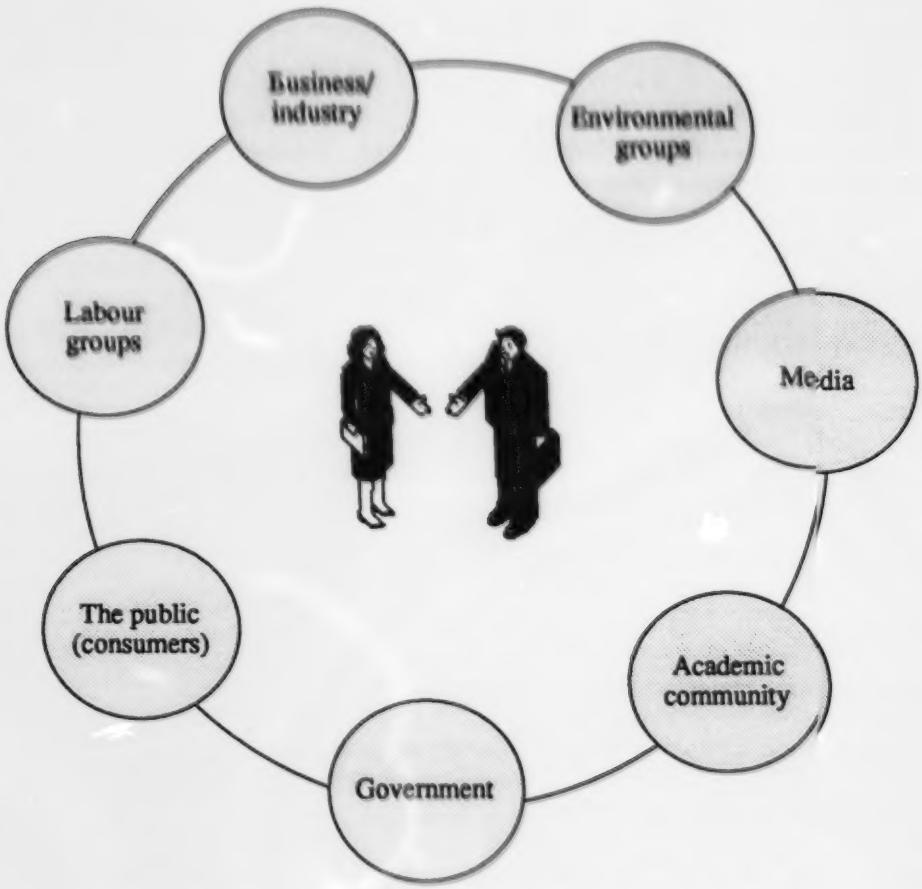
On the latter point, it is important not to stress the accomplishments of the Environmental Team over and above the efforts of other staff members. Environmental initiatives require everybody's involvement and recognition should be distributed as widely as possible throughout your firm.

E. Cooperate with outside "team members"

To fulfill its duties, the Environmental Team must network with a variety of societal groups (see Exhibit IV-3). These include government, environmental groups, the academic community, the media, labour groups and the public (consumers). In the past, these groups have often been viewed as adversaries. However, it is now accepted that each has a vital interest in the environment and it is only through cooperation with them that we will solve our environmental problems.

By viewing these groups as external "team members" with the same ultimate environmental goals, the Environmental Team can significantly improve its effectiveness.

Exhibit IV-3
Cooperative approach to environmental management among societal groups



V

Conducting An Environmental Audit

"A sustainable society is one that satisfies its needs without jeopardizing the prospects for future generations. Inherent in this definition is the responsibility of each generation to ensure that the next one inherits an undiminished natural and economic endowment."

Lester Brown
Worldwatch Institute

A. What is an environment audit?

An environmental audit or performance review (hereafter referred to as an "audit") is an objective, routine review of your operations, designed to measure corporate environmental performance against external environmental legislation and your own internal environmental policies and standards. This procedure should be as simple as possible and easy to administer. Before an audit is undertaken, it is necessary to:

- Identify the processes involved in your business.
- Establish a clear set of objectives and plans.
- Determine the terms of reference for the audit, including scope and structure.
- Develop the procedures necessary to implement the audit.

The audit can help your company to:

- Identify whether environmental objectives are being achieved and, if not, why not.
- Reduce exposure to litigation.
- Increase employee awareness of environmental policies and responsibilities.
- Evaluate regulatory compliance.
- Identify measures that improve your environmental performance and simultaneously reduce costs.
- Develop an information base to be used in the event of an emergency.
- Improve management awareness and decision making abilities.
- Recognize and reward good environmental performance.
- Improve relations with regulatory bodies and the community.

- Assess/evaluate liabilities and risks.
- Meet requirements of lending institutions.
- Satisfy ethical or risk-conscious investors.

In some businesses, such as industrial real estate, an environmental audit can be an essential tool in risk management.

B. Environmental audits versus financial audits

Environmental audits are commonly thought to be similar to statutory financial audits. In fact, environmental audits are very different from financial audits. These differences are outlined in Exhibit V-1.

Exhibit V-1
Environmental and financial audits compared

Financial Audit	Environmental Audit
Statutory requirements	Voluntary action
Annual event	No fixed timetable
Attestation to a statement	Provides advice and recommendations
Conducted by external body and published	Internal management tool
Range of standards, rules, legislation	Few rules and standards at present
Statutory minimum work required before attestation can be given	Work requirement negotiated individually

A number of pressures are developing to change environmental auditing to follow more closely the financial audit model. These pressures will likely result in two separate environmental audit processes, geared to suit the different needs of business managers and outside parties. This will parallel the system of internal and external financial audits. As with financial audits, it is likely that the performance review and attestation will be carried out by separate organizations.

C. Determining the parameters of the audit

Your environmental audit must be tailored to your individual company's needs, with the parameters strongly linked to your established objectives. It is therefore important to identify your exact requirements prior to selecting the type of audit you wish to conduct. For example:

- Regulatory bodies require a certain level of detail on compliance audits whereas the Board of Directors of a company or your own environmental policy may require more detailed management audits that analyze all aspects of the organization. The basic types of environmental audits are presented in Exhibit V-2. These audits are not mutually exclusive. That is, you may wish to conduct several of the audits listed in any one year.

- A real estate purchase may require a title search going back fifty years to determine previous uses of the property if pollution is suspected.

- A waste minimization audit may require research into new trends or technologies in Japan or Europe that can be adapted for use at your facility. This may be conducted on a thorough basis the first time, after which individuals responsible for certain areas will be expected to keep on top of new products and technologies and respond accordingly.

In determining the parameters of your audit, it is necessary to consider the following:

- Degree of analysis (compliance, managerial, comprehensive).

- Geographical locations (number of offices and plant sites).

- Organizational structure (number of departments within the organization).

- Time frame (frequency of audits).

- Environmental issues to be addressed (air, water, energy, waste, land).

Exhibit V-2
Types of environmental audits

1. Compliance audit

The purpose of a compliance audit is to ensure adherence to all relevant environmental laws, standards and guidelines. These may include:

- Permit and reporting requirements.

- Restrictions on air and water discharges and waste disposal practices.

- Regulatory limitations on operations.

- Monitoring requirements.

- Self reporting of violations.

The compliance audit is very focused as it is typically used to determine whether or not a company is meeting regulated standards. It may be expanded to include internal as well as external compliance with prescribed policies and procedures. It can be conducted by site, by group or by company.

2. Management audit

The purpose of the management audit is to assess the effectiveness of internal management systems, corporate policies and risks associated with materials management. For example, although disposal of certain toxic wastes may not be regulated, significant environmental impacts may arise if handling procedures are not tightly controlled.

Exhibit V-2 (cont'd)

The types of parameters that may be assessed include:

- The general state of equipment, plant, materials and storage areas.
- Evidence of the reliability and performance of processes.
- The quality of operations and operating procedures.
- The state of records on emissions, spills, effluents and waste.
- Details of off-site disposal.
- Review of infringements or conflicts with authorities or the local community.

The management audit is designed to ensure that your company is conforming to existing laws and regulations, as well as to facilitate development of proactive policies to mitigate environmental hazards. The audit may evolve within an organization from a simple compliance audit to the more thorough management audit.

3. Procurement audit

The purpose of the procurement audit is to review your purchasing practices and identify alternative products and equipment that have less impact on the environment. It may be conducted on its own or as part of a waste minimization audit, or management audit. This audit is typically completed with the purchasing staff which determines whether an item is essential, what options are available to reduce consumption, and what new product substitutes are available, along with respective costs and environmental impacts.

It is important to develop a "cradle to grave" approach when reviewing alternative products to ensure that they are significantly better for the environment. This involves looking at the environmental impacts of products from the extraction stage, through processing, manufacturing, shipping, utilization and disposal.

4. Real estate audit

A real estate audit is designed to identify potential environmental liabilities if the property had been used as a storage site for toxic materials. This information is essential to determine the true value of the real estate and, if necessary, conduct clean-up activities. The cost of a real estate audit is often less than the legal costs that could be incurred in a court battle to assign responsibility for clean-up, or the cost of the clean-up itself.

This type of audit is becoming a mandatory requirement in many real estate transactions where the presence of contaminants is suspected.

5. Waste minimization audit

The purpose of the waste minimization audit is to reduce the amount of waste generated and disposed from your operations. It includes a detailed quantitative and qualitative analysis of purchasing practices, processes, and waste streams. Opportunities are then identified for the reduction, reuse and recycling, in that order (see Appendix B), of both materials and supplies purchased and by-products produced.

6. Water conservation audit

The goal of a water conservation audit is to identify all sources of water use and look at ways to reduce total consumption through reduction, reuse and recycling efforts.

7. Energy conservation audit

The energy conservation audit allows you to track the energy consumption in your firm. Consumption of electricity, gas and fuel oils and any other types of energy should be identified, quantified and minimized, where possible.

Exhibit V-2 (end)

8. Supplier audit

The purpose of a supplier audit is to assess the environment performance of existing and potential business partners. They are used most often in the retail sector.

Exercise V-1: Selecting an audit appropriate to your firm

Exhibit V-3, below, lists the various audits described in Exhibit V-2. After briefly reviewing Exhibit V-2, check the audit(s) that may be appropriate to your firm. If this is your first environmental audit, you may want to choose a relatively simple protocol to start. It is better to set an achievable goal and attain it, than to be too ambitious and risk discouraging your Environment Team. You can always expand your efforts, completing a more comprehensive audit, or more than one type of audit, in future years.

Exhibit V-3
Selecting an audit(s) for your firm

Type of Audit	Complete this year	Not appropriate to firm	Complete at later date
1. Compliance	❑	❑	❑
2. Management	❑	❑	❑
3. Procurement	❑	❑	❑
4. Real estate	❑	❑	❑
5. Waste minimization	❑	❑	❑
6. Water conservation	❑	❑	❑
7. Energy conservation	❑	❑	❑
8. Supplier	❑	❑	❑

D. Developing the audit protocol

Once you have selected the type of audit you wish to conduct, you are ready to develop the audit protocol or procedures. The audit protocol is basically the methodology by which the audit will be conducted. The protocol will:

- Provide guidance to the auditors. (The auditors may be your internal staff or outside consultants.)
- Focus the review on items of importance.
- Ensure that the review meets the objectives established at the beginning of the audit program.

A clearly stated audit protocol provides the auditor or the audit team with a consistent set of instructions on the steps to be undertaken, areas to review and items to be addressed. The type and complexity of protocol required depends on the following:

- Type of industry being audited.
- Comprehensiveness of the audit.
- Skill of the auditor.
- Reasons for the audit.
- Time and budgetary constraints.

The following steps should be taken to develop your audit protocol.

1. Make initial contact

If an external audit is undertaken, the auditor should contact the department(s) or part(s) of the operation to be audited in advance, if applicable, to:

- Obtain its cooperation.
- Determine who is to be the prime liaison within the department.
- Specify the type and depth of information to be discussed.
- Determine lead times between initial contacts and site visits.
- Designate who will be responsible for informing staff about the audit, i.e., senior management within the firm, the audit team or whomever.

If you conduct an internal audit, the initial contact and subsequent steps may be undertaken on a less formal basis. The smaller the enterprise, the less formal and involved will be this and subsequent steps.

2. Identify key issues to be resolved

The auditor must be informed about how problems within the firm have been dealt with in the past, and instructed in how to deal with future problems. For example, if human error is found to be the source of exceeding toxic emission regulations in a compliance audit, the auditor must be supportive, positive, and have direction as to how to report the situation.

3. Develop methods for data collection, documentation and analysis

Methods for data collection and handling procedures must be established. Methods include personal interviews, surveys, documentation of existing information and inspections. The choice of methods and analysis will depend on the nature and size of your business and the objectives of the audit.

Exercise V-2: Selecting the audit team

The effectiveness of the audit program is directly related to the confidence, training, expertise and proficiency of the individuals conducting the audit. The chosen individuals should have technical and regulatory knowledge commensurate with the audit scope and the complexity of the facility to be audited. The auditor must be both professional and objective when conducting the work.

It is important that the auditor or audit team have a sufficiently diverse background to allow all issues identified to be addressed in detail.

Issues to resolve include:

1. Internal versus external personnel

External personnel can maintain objectivity and are not involved with the day-to-day financial affairs of the organization—both important considerations. However, it is also important to have a thorough understanding of the facility and the operations. Therefore, as a minimum, one internal staff member should be appointed to liaise with the auditor(s). It is necessary to determine his/her position and background in the firm. This will include number of years with the organization, level of education, and ability to work in a team environment.

2. Size and composition of the team

The scope of the audit and size of the facility to be audited will determine the size and composition of any audit team. A small job may require only one person whereas a corporate-wide management audit may require a team of up to five people, each with different skills—an in-house staff member, an engineer, an environmental scientist, a lawyer, an accountant, and an individual trained in business management to synthesize the information.

Decide whether you think an internal or external auditor or audit team is most appropriate to your organization. If you select an external audit, contact your local chamber of commerce, your industry association, local environment groups, or local environmental consultants for assistance in choosing an appropriate firm. If you have opted to go with an audit conducted by staff, you need to set about the task of appointing an auditor and possibly an audit team, and assigning duties.

Selecting an audit team:

Internal/External	Rationale
_____	_____
	_____
	_____

If internal: List potential team:

_____

_____

_____

If external: List organizations to contact for advice, and potential audit firm candidates

_____

_____

_____

E. Conducting the audit

Conducting the audit requires that objectives, parameters and procedures be determined and documented. If this preparatory work is properly completed, conducting the audit is relatively straight forward. There are three basic components of this task:

- **Pre-visit preparation**—this stage includes review of audit procedures and relevant legislation by the auditor or audit team; submission of pre-visit questionnaires where necessary; and development of an audit agenda and schedule that includes the assignment of responsibilities to audit team members if applicable.

- **Desk review**—information must be compiled on the history of the company's operations from an environmental impact perspective. It may also be important to review the history of previous firms that may have conducted business on the same site. Company policies and procedures relevant to environmental protection should also be reviewed at this stage.

- **On-site activities**—at this stage briefing meetings, site tours, interviews, staff observations, and post audit debriefing occur. Frequently tours, interviews and paper reviews are iterative, since verification or follow-up information is often required. Specific activities include testing equipment, reviewing permits and compliance with those permits, determining adequacy and maintenance of pollution control equipment, and checking the locations of environmental safety and hazard warning signage.

An overview of some key elements of an environmental audit is presented in Exhibit V-4, below. This diagram demonstrates the importance of taking an eco-balance approach to the review, analyzing inputs, transition processes, and outputs, in a holistic manner. The basic philosophy is to investigate every avenue to minimize environmental impacts, conserve resource and energy use, and eliminate environmental hazards. A more detailed checklist that you can use to conduct your own internal environmental audit is provided in Appendix B.

F. Analyzing the audit information

After completing the environmental performance investigation, the auditor must then conduct a detailed review of the findings. The typical approach to this analysis is to compare your company's practice against the following benchmarks:

- The best practice in your industry.
- Relevant laws and regulations.
- Your company's stated policies and guidelines.

If an external auditor is hired to conduct the audit, he/she will likely have an analytical framework to assist in making this comparison. This framework further allows the auditor to assess the degree of environmental risk from a particular practice.

It is relevant to note that the recommendations that flow from this analysis depend on the stated objectives of the audit, the degree of environmental risk, and the urgency and cost of making improvements.

G. Writing the audit report

Following a preliminary summary report, auditors must identify issues requiring remediation and address these concerns in a final report. The style of the audit report should be direct, factual and informative. All problems should be clearly stated. For example, "Emissions of NOx exceeded regulatory limits by 12% at stack #2 at site A on the day sampled." Ensure that the report is fully supported by the data. Avoid conjecture and extrapolation as this can lead to false interpretation.

When the audit is complete, an audit completion meeting should be held to discuss findings with facility management and key employees. This will improve awareness of the findings and their significance to the company.

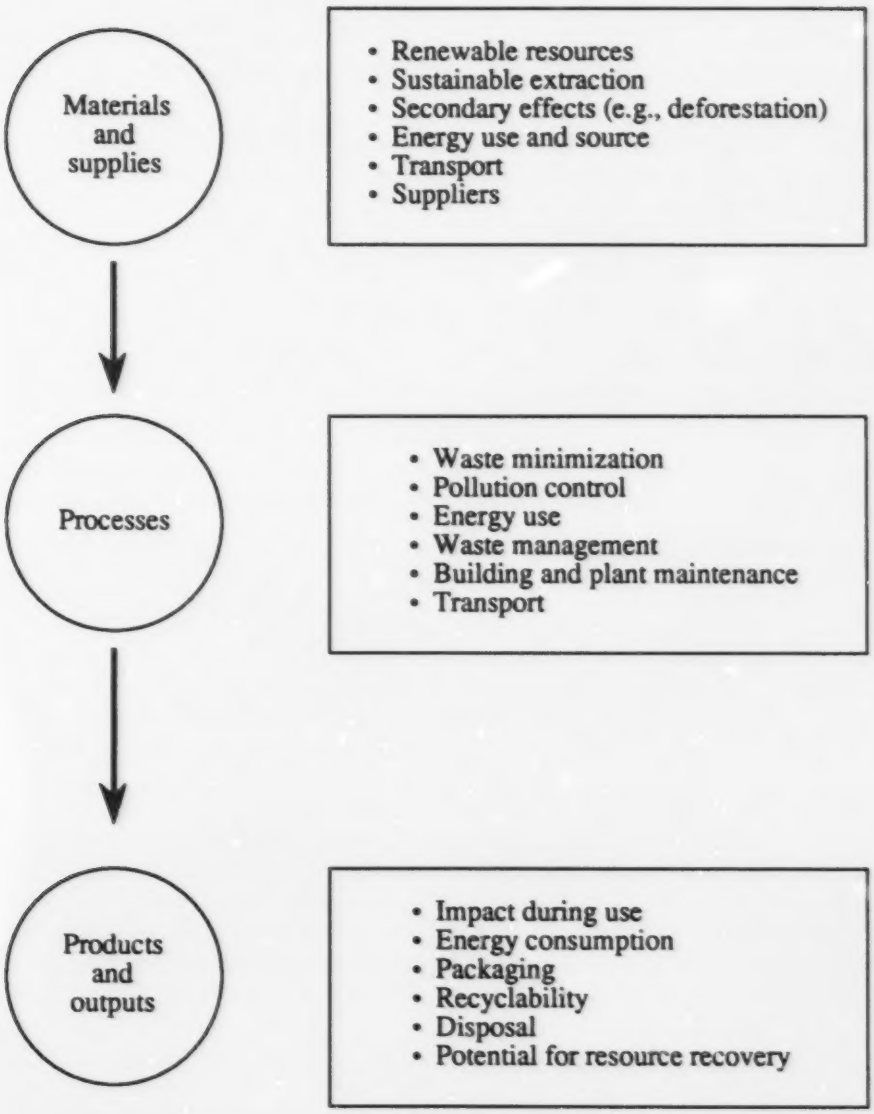
Draft copies of the report should be distributed to other team members and facility management, where applicable, to evaluate accuracy. The final report should then be prepared and presented to the Environmental Coordinator, the Environmental Team and/or management.

H. Audits should be conducted regularly

The audit, like a balance sheet, presents a snapshot of a company's environmental performance at a particular point in time. Audits should be conducted on a regular basis to make comparisons and identify improvements.

The frequency of audits should be determined by such issues as the rate of change in relevant technologies, or the need to conform to standards within a given time period. Thus, when upgrading facilities to meet regulations, consider conducting another audit after the new equipment is up and running to verify that it does, in fact, perform to specification.

Exhibit V-4
The environmental audit—key elements to address



VI

Identifying Environmental Opportunities

A. Turning environmental responsibility into environmental opportunity

While a comprehensive, internal environmental management program will ensure that your company is conducting business in the most environmentally responsible manner, it can also help you create profitable, external market opportunities. You can take advantage of these market opportunities using two primary strategies:

- **Environmental innovation**

  You can reposition your existing products or services to respond to green consumer demands. This approach allows you to capitalize on growing environmental awareness and concern using innovative or lateral thinking, while continuing to conduct your main line of business.

- **Environmental enterprise**

  You can use an entrepreneurial approach to profit from the greening of consumer attitudes and behaviour by developing new products and services with an environmental orientation. Environmental challenges are very diverse and widely encompassing and, as such, represent plentiful market opportunities for firms of all sizes and industries.

These two strategies are discussed in more detail in the following sections.

B. Repositioning existing products or services

It may be possible to change the emphasis of your marketing or sales strategy to highlight the environmentally friendly aspects of your company, products or services. This "repositioning" to take advantage of your customers' concern about the environment may require as little as a modified sales pitch, or as much as a change in product processes, product formulation or service delivery. To evaluate the feasibility of implementing a repositioning strategy, you should follow the steps outlined below.

1. Analyze your operations

To successfully implement a repositioning strategy, you should ensure that your operations are environmentally friendly because you will be scrutinized by environmentalists and possibly by your customers. While no company can claim to be perfectly environmentally sound, it is important to make your best effort. It would provide no benefit to promote your green attributes if you are perceived to be a major polluter.

Your environmental audit should let you know how your operations will stand up under scrutiny. If you have a significant amount of serious clean-up work to do, it is best to delay any repositioning strategy.

Because this is a grey area, you may want to enlist the help of experts, or talk to environmentalists before making a decision about whether to proceed with your green marketing program.

2. Review your products or services

Once you have analyzed your operations, you should review your products or services to determine how they can be repositioned from the environmental perspective. Some popular repositioning strategies for products include the following:

- Reduce the amount of raw materials that go into your products or packaging (e.g., miniaturizing, thin-walling).
- Minimize or eliminate the use of toxic materials and substitute them for natural or environmentally benign materials (e.g., non-toxic paints).
- Adopt new technologies that use less energy and create less waste, effluents, and emissions in the manufacturing process.
- Switch from disposable products and packaging to recyclable or reusable products and packaging (e.g., paper bags to cloth bags).
- Make your products more durable so that they last longer (e.g., umbrellas).
- Make your products with recycled content (e.g., fine paper).
- Emphasize the natural environmental attributes of your existing products (e.g., computerized thermostats that conserve energy , baking soda).

To reposition a service, you basically need to demonstrate a strong knowledge of environmental issues. The basic type of service remains constant but is overlaid with an understanding of the environment. Examples include:

- Environmental investment funds (knowledge of successful environmental technologies).
- Environmental law (knowledge of environmental laws).
- Environmental management (knowledge of how to integrate the environment into economic and business management decisions).
- Environmental training and education (knowledge of latest environmental trends).
- Environmental accounting (knowledge of the"true" costs of economic activities on the environment).
- Eco-tourism (knowledge of the ecological features of a travel destination).

The difficult challenge is to develop products and services that represent a significant environmental improvement over their traditional counterparts. Environmental standards are rising rapidly among consumers and regulators. As a result, the greener your products and services are, the better chance they have of providing an economic benefit to your firm. Meeting increasingly stringent world environment standards is particularily relevant for export oriented enterprises.

If, after reviewing your operations, products and/or services, you believe your company is sufficiently environmentally friendly to warrant emphasizing the green theme, you are a suitable candidate for a repositioning strategy. Provided that market research indicates your customers will react positively, you should modify your marketing and sales strategies to emphasize your green attributes.

Exercise VI-1: Repositioning existing products or services

For product companies:

Examine your products and rate their potential for modification and repositioning as green products.

Product(s)	Green Potential
_____	_____
_____	_____
_____	_____
_____	_____

For service companies:

List the attributes of your company's operations or services that could be emphasized to support green repositioning.

Green company or service attributes

_____

_____

_____

_____

_____

_____

_____

C. Identifying new products or services

If a repositioning strategy is unsuitable, you could consider introducing new products or services. Rising public environmental concern and new environmental laws are creating a burgeoning multi-million dollar demand for new environmentally-oriented products and services that have not previously been available on the market. The range of business opportunities spans virtually every industry sector, and is limited only by the imagination. Several implementation approaches are possible, including:

- Developing a new green product or service that you previously did not sell.
- Licensing a new green product or service available outside your geographic sales area.
- Purchasing the distribution rights to a new green product or service.
- Importing a green product.

Beware that having done your research and introduced your green product or service, your work has just begun. You must continually stay abreast of environmental trends, consumer attitudes, and legislation developments. The environmental marketplace is continually evolving and you will need to adjust your operations accordingly. While this uncertainty introduces an element of risk into the process, the rewards are well worth the extra challenge.

Exercise VI-2: Identifying new products or services

Divide into groups, as directed by your seminar leader. Briefly describe your company to the other members of the group and brainstorm new product or service ideas that would complement each group members' existing business. Use the space below to record ideas that may warrant research.

New green product or service ideas:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

VII

Preparing An Environmental Action Plan

"There really can be no further excuse for inaction. Every chief executive of every company should start tomorrow preparing plans for environmental action."

Anthony Cleaves
C.E.O., IBM U.K.

A. The action planning process

The purpose of the action plan is to translate the results of your audit into practical strategies that your employees can follow. A well developed action plan will contain both strategic planning and implementation planning components. An overview of the action planning process is depicted in Exhibit VII-1. This action plan should be part and parcel of your overall business/strategic plan.

As with any planning process, you begin by gaining consensus on the key issues and by establishing goals and objectives. You then develop strategies and tactics. While goals and objectives identify **what** you are going to do, strategies and tactics identify **how** you are going to do it. Finally, you assign costs, time frames and responsibilities. As shown in Exhibit VII-1, each level of the planning process must support the level above it and all must support and adhere to the company-wide environmental policy discussed in Chapter III.

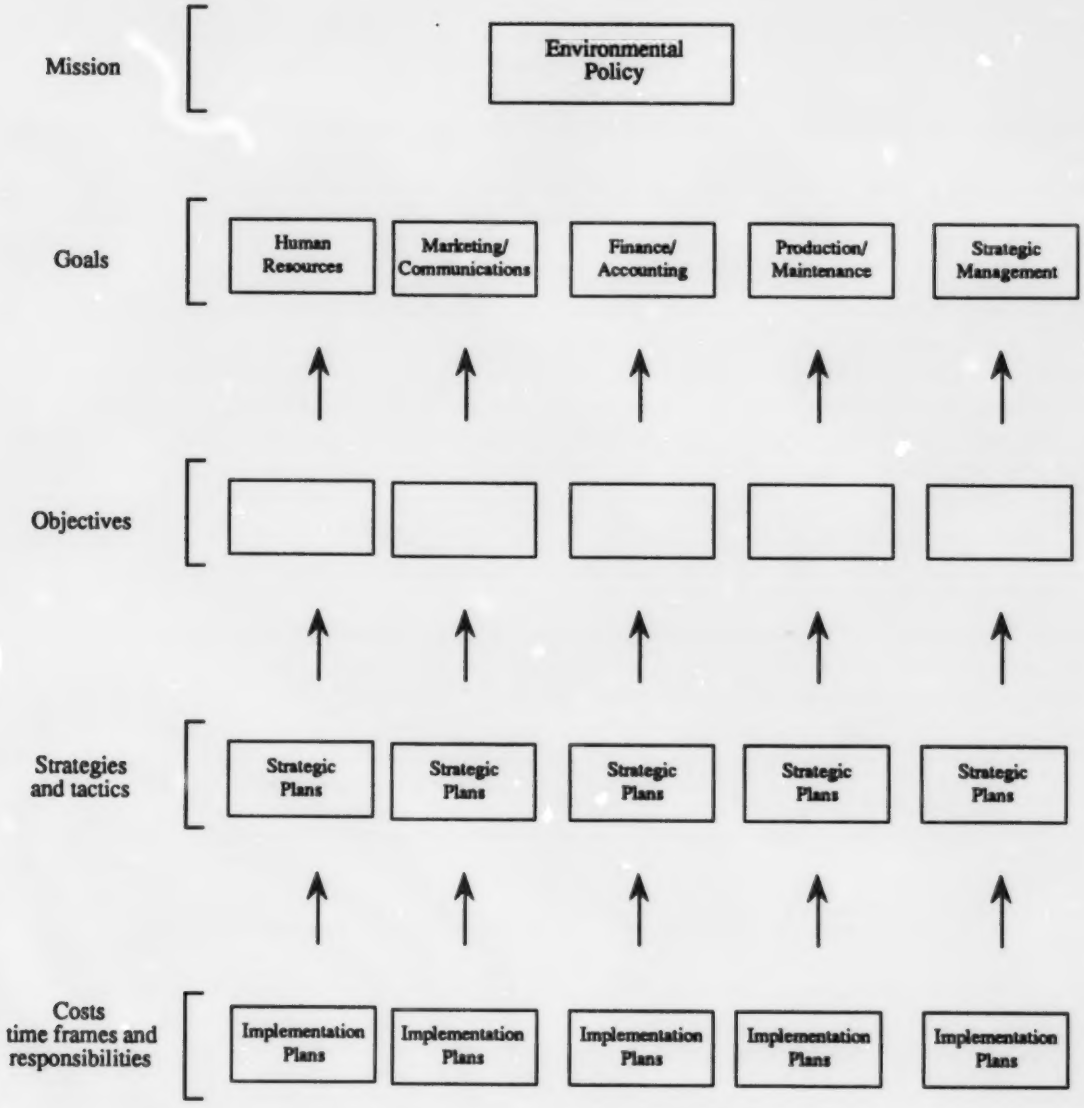
B. Identifying goals and objectives

Audit reports should be reviewed by the Environmental Coordinator or Team because they have been given the responsibility to prepare and implement your action plan (recognizing that Board approval may be required). You may wish to include a member of the audit team on the Environment Team, or otherwise ensure a liaison between Coordinator and auditors, to provide clarification and additional insight when needed.

It is important at this stage to reach consensus on the issues highlighted by the audit that require action. These issues should be ranked in terms of urgency, as follows:

- High priority—requires immediate action.
- Medium priority—requires action within three to twelve months.
- Low priority—no immediate action required but may become a higher priority in the next one to two years.

Exhibit VII-1
Overview of the action planning process



This consensus development stage can be conducted in a roundtable session. It may be necessary to bring in outsiders like suppliers or qualified "experts" for a brain storming session and subsequent evaluation, particularly if the environmental audit brings issues to light that have never before been considered.

Once you have agreed on the environmental issues requiring action, you are then ready to set goals. Some of the goals will be long-term (to be accomplished within three to five years) while others will be short-term (to be accomplished within one year or less). Goals represent the end points you want to reach. They are supported by measurable objectives that are challenging but achievable. An example of a goal and supporting objectives is as follows:

Goal: "To be the most environmentally-conscious company in our community."

Objectives: "To reduce our rate of energy consumption 20% from current levels within twelve months."

"To double the amount of waste cardboard sent for recycling by the end of the year."

"To exceed 90% staff awareness of our environmental programs within six months."

Exercise VII-1: Developing goals and objectives

Based on what you believe will be the likely results of your environmental audit and subsequent priority ranking of issues, record three goals you would like to see your organization achieve. Attach one to three *measurable* objectives to each.

Goal	Objective(s)
_____	_____
	_____
	_____
_____	_____
	_____
	_____
_____	_____
	_____
	_____

C. Developing strategies and tactics

Strategies and tactics refer to the specific actions you must undertake to fulfill your goals and objectives. Strategies are generally broader and longer term than tactics. Some examples of strategies that might relate to three sample objectives in different departments are:

1. Finance/accounting department

Objective: "To reduce our energy costs 20% per unit of output from current levels within twelve months."

Strategy: "Develop energy conservation program in plant and office."

Tactic: "Appoint an energy management coordinator who will dedicate 25% of his/her time to this function."

2. Production/maintenance department

Objective: "To double the proportion of waste cardboard sent for recycling by the end of the year."

Strategy: "Set up bins to collect waste cardboard by garbage bins in appropriate areas of plant and office."

Tactic: "Announce program in company newsletter."

3. Human resources department

Objective: "To ensure all the staff is aware of our environmental programs within six months."

Strategy: "Hold short weekly information sessions over next six months; designate space on bulletin boards to announce initiatives.

Tactic: Develop poster for bulletin boards and for posting in offices.

Exercise VII-2: Attaching strategies and tactics to your goals and objectives

Below, list the three primary objectives identified in the previous exercise. Beside each, record strategies that would allow you to achieve your objectives.

Objective	Strategy	Tactic
_____	_____	_____
	_____	_____
	_____	_____

Objective	Strategy	Tactic
_____	_____	_____
	_____	_____
	_____	_____
_____	_____	_____
	_____	_____
	_____	_____

D. Assigning costs, time frames and responsibilities

The final step in the action plan is to assign time frames and costs and responsibilities to each tactic. An "Action Plan Matrix" is included in Exhibit VII-2. Typically, non-compliance issues should be addressed first and be given adequate funds. The next priority is to conduct tasks that involve a significant number of your staff and are easy to implement.

Another consideration in scheduling action items is external communications. If your firm or industry is facing intense public scrutiny, it may be more important to work on highly visible programs rather than on those that focus on building internal morale.

It is important to assign responsibility for each action item to a specific individual. The person chosen will be required to plan, implement and ensure success of the action item. The responsible employee should be highly motivated and keen. He or she should be given adequate resources, including time away from regular duties, to conduct the work. The best approach is to select someone with a vested interest in the project (i.e., where the action plan has a significant impact on the department or job).

Wherever possible, try to adopt a voluntary approach with staff, as opposed to making cooperation mandatory. You will likely be surprised at how willing employees are to work on environment-related tasks.

E. Integrating your environmental action plan and your financial plan

For the environmental action plan to be successful, it is imperative that environmental considerations by fully integrated into your financial plans. You must ensure that sufficient financial resources are made available to implement the changes recommended in the action plan. These expenditures need not necessarily mean a drain on your company's resources. In fact, many companies are discovering that their environmental efforts make a positive contribution to their bottom line.

When planning an investment or major item purchase, it is important to:

- Consider environmental impacts and associated environmental costs.
- Do not discriminate against long-term environmental projects (those providing a return after a number of years).

For example, be establishing recycling bins in your office you can generate revenues from the sale of the materials as well as reduce landfill disposal fees. While it may cost you a certain amount to buy the bins and set up the program, these costs will more than be recovered through increased employee cooperation and morale.

Similarly, when you purchase products, supplies or packaging you should consider the costs of acquiring, using, distributing and disposing of those items throughout their life cycle. You may even wish to consider establishing a profit centre to better demonstrate the benefits of environmental management on your bottom line.

When purchasing environmental protection equipment or services, it is important to:

- Favour those technologies that provide simultaneous productivity improvements.
- Favour preventative technologies as opposed to end-of-pipe technologies.

It is worthwhile to research and take advantage of government funding programs related to the environment and to energy management. A list of these is provided in Appendix C.

Exhibit VII-2
Action plan matrix

Tactic	Budget $	Start Date	Completion Date	Responsible Employee

VIII

Training And Motivating Your Staff

"We have found that the attitude of the personnel on site, at every level, is the most important factor affecting compliance with environmental regulations."

John Butlin, Managing Director
J.A. Butlin Ltd.
Natural Resource and Environmental Management Consultants

Your employees represent both the greatest opportunity for success and the greatest threat of failure to your environmental program. If staff are convinced about the program, it will virtually run itself. However, if it is not supported, the program will fail no matter how well some aspects have been adopted. While top management must provide the initial commitment and ongoing support, the staff will be called upon to provide the follow-through.

A high level of staff involvement is imperative for your program to work. It is a basic management principle that people do not reject their own ideas. If staff perceive the environmental program as "theirs", they will be its greatest champions. This is the key to success because, after all, your staff will ultimately be responsible for implementing the environmental action plan.

A. Establishing a training program

Whatever the size of your firm, your training program should be established in a participatory manner using a cooperative management approach. In fact, improving staff awareness and knowledge of environmental issues and company activities relating to the environment should be more of a coaching process than a traditional training process. Training about environmental issues must coincide with societal attitudes about the environment. The training program can only be expanded at a pace that matches public awareness and attitudes toward the environment. Each new company environmental program must be introduced in a sensitive manner with strong consideration for affected staff.

It is often effective to develop an environmental training program that both raises general awareness about the environment and introduces your company program. Scheduling may be simultaneous (general heightening of awareness and company program introduction), or you may choose to raise general awareness levels first.

1. Raising awareness

Some means of improving awareness include:

- Providing information about local pollution incidents that may affect your staff, and providing government pamphlets on individual action to protect the environment. (Raising general awareness.)

- Establishing an environment section on your bulletin board or otherwise providing periodically environmental information specific to your firm or industry. (Raising company-level and general awareness.)

- Inviting an environmental expert to make a presentation on an environmental issue. A number of sources of guest speakers are appropriate including: government officials that develop and enforce environmental legislation, representatives of environmental groups that are working cooperatively with business, scientists and inventors of new environmental technologies, and representatives of private firms that provide environmental services or products. (Raising general awareness.)

2. Introducing your company program

The introduction of your company program should be widely publicized within the firm and should cover:

- Overview of environmental issues.
- Goals and objectives of program.
- Benefits of the program.
- Staff roles and responsibilities.
- Progress to date.

Depending on the size of your company, you may wish to hold office-wide training sessions or provide separate sessions for staff in different departments or at different levels of the organization. It is important to identify who should attend training sessions and how relevant these employees will find the information. For larger companies, possible groups include:

Management personnel
Production staff
Administration staff
New employees and trainees
Representatives of major supplier firms
Major customers.

The environmental training program should be organized by your Environmental Coordinator. These training sessions could be conducted by this individual or by the staff person who conducts training in other areas of your company.

Staff training needs to start early in the process of greening your firm. Even if you are just at the stage of developing your environmental policy, training should begin, in order to both inform your employees of your plans, and provide a forum for employee input.

Exercise VIII-1: Selecting key participants

Consider the most appropriate way of dividing your company into groups for training exercises. For maximum effect, each group should comprise no more than twelve to fifteen employees. In many businesses a group this size will encompass the whole staff. Each and every employee in your organization should be included in your training program.

Training session groups:

_____

_____

_____

_____

_____

_____

B. Motivating your staff

While training provides knowledge, it does not necessarily engender motivation. A variety of additional strategies must be pursued to encourage employee involvement in the process. Some "do's" and "don'ts" of building employee motivation include the following:

- Do tell employees your environmental objectives, but wherever possible allow them to use their own creativity or innovation to determine HOW to meet those objectives.
- Do give praise in the presence of others (it is not only twice as effective, but also motivates others to follow suit).
- Don't give an employee a fait accompli or proceed without his/her input (voluntary participation yields far better results than mandatory enrollment).
- Don't try to make too many environmental changes in too short a period of time: it will only create resistance.

In summary, it is important to create an organizational culture in your firm that encourages spontaneous initiative-taking by your staff.

C. Maintaining awareness

A variety of techniques can be used to maintain awareness about environmental policies, programs and practices in your firm. Possible techniques include the following:

- Allocate space on your notice board or create an "Environmental Program" notice board to pass on environmental news, or raise awareness (e.g., posters above photocopy machines encouraging people to double-side their photocopies).

- Incorporate an "environment column" in the company newsletter, if you publish one.
- Establish a company environment library ... This can be one shelf in one of the bookcases.
- Purchase recycled stationary and other environmentally sound products that encourage staff to "think environment" every time they use them.
- Organize an "environmental raffle" with an attractive (and environment sensitive) prize.

D. Celebrate successes

Take every opportunity to publicize environmental achievements through a variety of "celebration events" and to reward environmentally-positive behaviour. Big awards for herculean efforts are a must but numerous awards for small acts of heroism are at least as important. Some guidelines for recognizing and rewarding "green" deeds are as follows:

- Stress the involvement of all staff concerned, not just the Environmental Coordinator or Environmental Team members.
- Provide incentives for environmental suggestions from staff members (e.g., offer a company paid lunch for the best environmental suggestion in a given month).
- Announce successful suggestions at staff meetings, on bulletin boards, and at other convenient opportunities.
- Offer a cash bonus for any employee environmental suggestion that improves environmental quality while reducing overall costs.
- Give most of your rewards to teams of people, not individuals.

For each incentive, ensure that the rewards are clearly defined and equally applied throughout your company. If you want to build a team spirit, make sure that the gang at the distribution centre are recognized with as much enthusiasm as the managers in the office.

Exercise VIII-2: Creative ideas for maintaining awareness and celebrating successes

This exercise is designed to be conducted during the FOCUS 2000 Environmental Management Workshop. Divide into groups as instructed by your seminar leader. With other group members, brainstorm methods of maintaining awareness about the environment, and of rewarding successes. Be ready to share your group's ideas with the class.

Maintaining awareness:

_____

_____

_____

_____

_____

_____

Celebrating successes:

_____

_____

_____

_____

_____

_____

IX

Communicating Your Endeavours

"Information is not knowledge. You can mass produce raw data and incredible quantities of facts and figures. You cannot mass produce knowledge, which is created by individual minds, drawing on individual experience."

Theodore Roszak

A. Developing an external communications program

The purpose of developing a communications program is to establish an ongoing and positive dialogue between your company and the public. Not only will this improve your corporate image, it will also promote environmental protection in general. Company size and available resources will determine the extensiveness of this program.

One very effective and inexpensive method of communicating your environmental endeavours is to contact the media. The media are generally very receptive to reporting corporate environmental success stories so long as they are substantive and have human interest appeal. One newspaper or magazine article provides far greater public relations value than ten paid advertisements.

Tailor your communications to reach a variety of target groups, including:

- Your staff.
- Your customers.
- Your suppliers.
- Environmental groups.
- Government representatives.
- Industry associations.
- The general public.
- School children (they have a major impact on their parents).

B. Beware of potential pitfalls

While developing a communications program has many positive benefits, it can have some potential drawbacks. A number of companies have learned some hard lessons. Below, we outline some precautions you can take to avoid negative backlash when communicating your environmental endeavours. While not every suggestion is applicable to every situation, these ideas are a checklist of strategies for all environmental communications.

1. Be sure of your facts

Your environmental activities will be carefully scrutinized by your customers and the general public. If you have instituted a new environmental program, make sure that it is fully operational before making claims about it. If your customers or the public discover that one of your claims is untrue, they will not believe other claims that you make.

2. Be modest about your efforts

It is very difficult to say that your operations are completely environmentally benign. The public largely understands this, however, and will not be critical of you so long as you remain modest about your environmental endeavours. The media, environmental groups and the public have become too discriminating on environmental issues to accept what might be considered a typical overstatement in an advertising claim.

3. Be open and honest

If any individual or organization questions you about your environmental initiatives, be frank about what you know and admit what you don't know. If you are open and honest, you will gain the public's trust and obtain strong corporate image value.

If you have a particular environmental problem, acknowledge it. Public attitudes about the environment are driven by deeply felt emotions and sentiments. Denying a problem will likely create a storm of protest from which it will be difficult to recover.

4. Be willing to compromise

When responding to public pressure to improve your environmental performance, try not to take a rigid stance. The public will be unlikely to accept that certain aspects of your environmental action plan are not debatable, especially if you have no reason for that entrenched position. Adopting a take-it-or-leave-it approach will only encourage the public to reject your initiatives.

5. Be aware of public perceptions

Before communicating your endeavours, it is beneficial to understand the perspectives of the various interest groups. In particular, it is important to know what the government expects as well as to understand the positions of environmentalists, the media, and the public. Researching these perceptions allows you to prepare your position carefully and not be forced to act defensively.

6. Take an active approach

When the discussion heats up, don't shy away from the debate. It is important for you to state your position publicly on a particular environmental issue. By taking a passive approach your message will not be heard and you may open yourself to attack and defensiveness.

7. Focus on alternatives

One positive way to overcome a stalemate of positions is to provide alternatives or refocus the issue in a more positive direction. Offering a way out as opposed to dwelling on the negative may be all that is needed to achieve success.

8. Talk in specific terms

Wherever possible, use specific examples and activities when describing your environmental endeavours. Specific statements are easier to understand and more plausible than general statements. The use of "Motherhood" statements can lead the public to believe that your company prefers words to action.

9. Report on past events

It is better to report on what you have done rather than what you are planning to do. This ensures that the image you provide of your firm matches the reality. Describing noble future intentions may be perceived by the public as a smokescreen to cover up a depressing current situation.

Exercise IX-1: Developing your communications program

1. Step 1: Choosing a theme

Decide on the main message or theme you want to convey. This could be anything from the fact that you have developed an environmental policy to specific steps in your action plan.

Theme:

_____

_____

Step 2: Identify supporting examples

Think about the changes or actions that are likely to take place in your organization that support or demonstrate the theme. For example:

Theme: "We have become more environmentally friendly."

Actions: "Started office and plant recycling programs."

"Reduced energy consumption."

"Reduced amount of packaging in our products."

Record as many actions as you can think of that support your theme.

Actions:

Step 3: Coming up with specifics

Think about the specifics that you might plan. People like to hear facts and figures. These lend credibility to your claims and help the audience put your news in context. For example:

Specifics: "We have reduced our consumption of paper by 30 tonnes this year and are recycling all our paper waste." (Converting this figure to the number of trees saved will have a big impact on your audience.)

"We have diverted a total of 3,000 tonnes of waste from local landfills this quarter."

Record some sample specifics that support your theme and examples.

Specifics:

C. Writing and communicating your story

Once you have established a theme and supporting examples, as described in Exercise IX-I, above, you are ready to put your message down on paper. You must decide whether a staff member will be responsible for this task, or whether an advertising or public relations firm is better suited to the job.

Most companies find that, at least initially, the job of writing your story and getting it out to the press and public is best handled by professionals. These firms have the connections needed to obtain coverage of your story and are familiar with the kind of language that should be used.

Once your story is out, you can expect to be contacted by the media. Your firm should appoint a spokesperson (this may be your Chief Executive Officer, or your Environmental Coordinator) who will handle all press interviews. You may want to consider providing this person with formal training regarding handling media interviews. Your local chamber of commerce, university or community college can probably let you know whether such courses are available in your area.

Your story is probably easily converted to speech format. Addresses to organizations like industry associations, public interest groups and business clubs are an effective means of getting your message out. These meetings are often attended by local press.

D. Monitoring your success

Communication is not a one-way process. To ensure that your communications program is producing the desired results, it is important to conduct ongoing market research of your customers, environmental groups, and the public. Some popular methods of obtaining feedback are presented below.

1. Distribute mail-out questionnaires

You can send questionnaires to your customers by mail. You will drastically increase your response rate if you make the questionnaire as brief as possible, include a self-addressed postage paid envelope, and include some type of incentive for completion such as being entered into a free draw. Contacting your customers in advance and obtaining their commitment to complete the survey is another way to greatly improve response rate.

2. Conduct telephone surveys

To obtain more detailed information than a mail survey, you can conduct telephone interviews with your customers or the public. Telephone interviews allow you to probe for more information on topics of particular concern. While more expensive to conduct, telephone interviews generally produce a much higher response rate than mail-out questionnaires.

3. Conduct personal interviews

You can conduct personal interviews at the point of purchase of your products. The advantage of personal interviews is that they allow you to obtain information from non-customers.

4. Conduct focus groups and roundtable discussions

You can invite representatives from various interest groups to provide feedback on your environmental initiatives. This survey method is expensive (although less expensive than telephone surveys) but provides very "rich" information. People tend to generate many more ideas and suggestions in a group situation than they do individually. Focus groups can often turn your detractors into active supporters if they are made to feel ownership in your efforts.

5. Provide a telephone "hotline" service

You can provide a temporary or permanent telephone service that anyone can phone contact with an opinion about your environmental initiatives. This can be particularly worthwhile just after the launch of your communications program.

6. Provide suggestion boxes

You can provide suggestion boxes at strategic locations at your point-of-purchase. While suggestion boxes are instituted in many organizations, they often fail to be used because people don't believe that their suggestions will be acted upon. Conversely, organizations that demonstrate prompt follow-up to the suggestions provided find this survey method to be very productive.

Depending on the size and nature of your business, you may favour some survey methods over others. The important point is to continually monitor how your customers and other interest groups perceive you. Only in this manner will your communications have meaning and impact.

Exercise IX-2: Planning market research

Briefly review the methods of conducting market research presented in Section D, above. Decide which method(s) would be most appropriate to your company.

Research methodology:	**Rationale for selecting:**
_____	_____
	_____
	_____
_____	_____
	_____
	_____
_____	_____
	_____
	_____

X

Repeating The Cycle

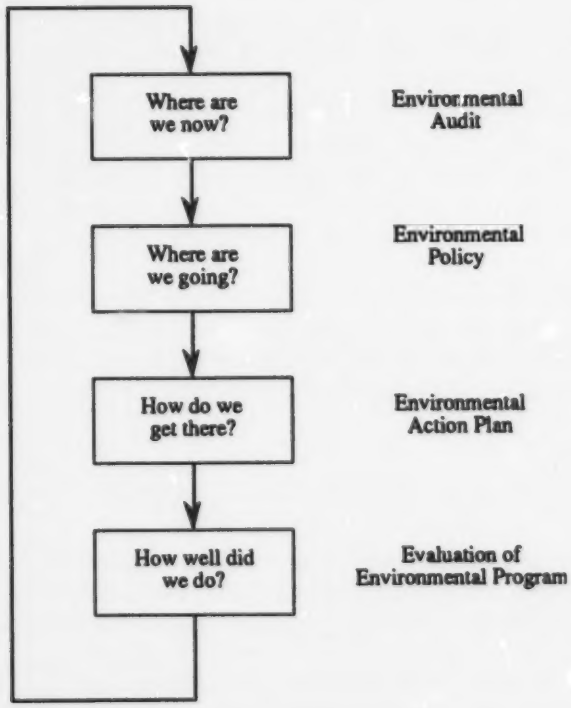
"The world is moving so fast these days that the person who says it can't be done is generally interrupted by someone doing it."

Elbert Hubbard
American author

A. Evaluating your past success

Upon completing the seven steps described in the previous chapters, it is important to evaluate your success. This stage in the environmental management process is illustrated as the final box in Exhibit X-1.

Exhibit X-1
Abbreviated diagram of the environmental management process



Evaluating your previous success allows you to develop a positive track record that can be communicated to interested parties. Further, success itself provides encouragement that further accomplishments are possible. Such optimism is often felt most by those immediately affected by positive results.

B. Take a long-term view

Whether you operate a large or small business, it is important to adopt a long term approach in developing your environmental action plan. While some environmental initiatives provide immediate returns, many others take much longer to produce tangible rewards. A preoccupation with short term quarterly financial results is counter-productive to an effective environmental strategy.

Not only will this approach provide long term benefits for your company, it will also provide long term benefits for society in general. Apart from the environmental benefits, a long term environmental strategy will produce medical, social, cultural and economic benefits as well.

Sustainable development implies that future generations must not be adversely affected by the activities of present generations.

C. Conduct ongoing market research

Environmental issues are continually evolving and changing. To keep abreast of these events, it is important to conduct ongoing research. In the previous chapter we talked about conducting research on the attitudes and awareness of your customers and other interest groups. Other ways to keep track of environmental "current affairs" include the following:

- Subscribe to environmental business publications.
- Attend environmental trade shows and conferences.
- Join environment-related associations.
- Read and maintain a library of environment-related reports.

After you have identified those issues most relevant to your organization, conduct specialized market research to find out how you can adapt your environmental action plan accordingly. A list of government and non-profit organizations concerned with business and the environment is presented in Appendix D. A list of books, periodicals and directories dealing with business and the environment is presented in Appendix E.

D. Treat environmental performance as a competitive tool

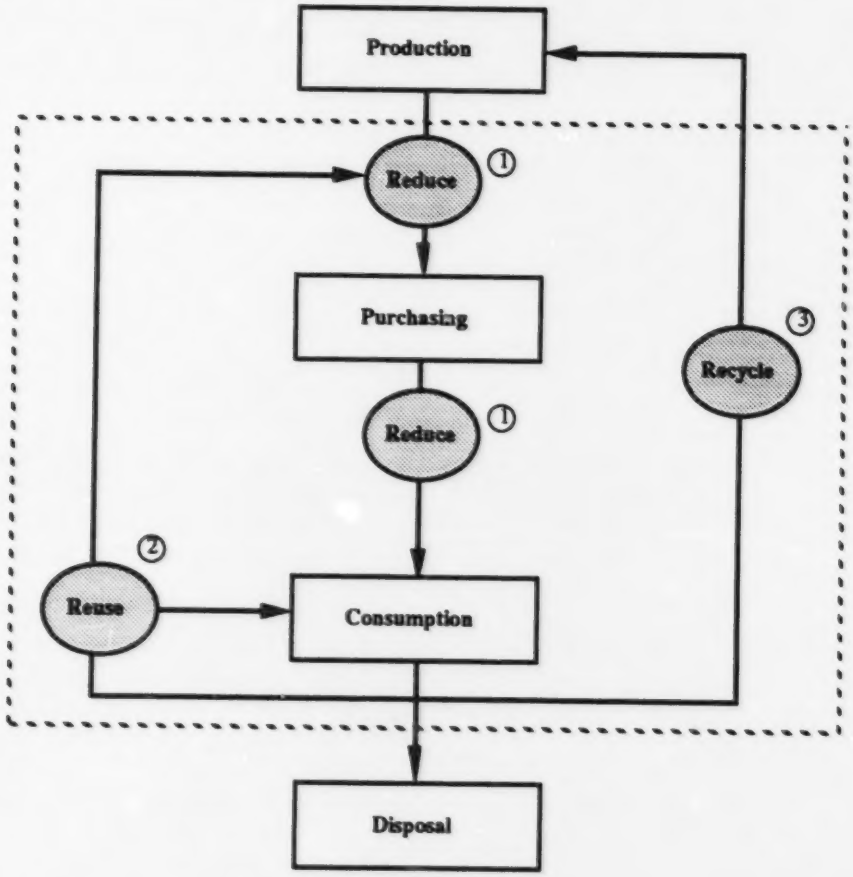
In today's global marketplace, the survivors will be those who can deliver competitive products and services in an environmentally sound manner. Those companies will be the ones that develop an environmental management program that extends through every part of their organization and to the external community.

While short-term transition costs may arise when initiating the environmental management process, in the long term it will dramatically help to improve a firm's competitive success. More and more companies are recognizing the positive linkages between corporate performance and environmental performance. We encourage you to join them so that your firm will reap the environmental and economic benefits necessary for success in this new business era.

Appendices

Appendix A

Waste Flow Diagram



Note: The dotted line denotes the boundary of activity controlled by your company.

Waste minimization means:

1. Reducing your total purchases and your internal consumption patterns.
2. Reusing resources either internally or externally (e.g., sell or donate to other organizations who can reuse the resource).

Appendix B

Environmental Audit Checklist

	Yes	No
Compliance Audit		
➤ Have you made a list of all permits held and the limits contained within the permits.	_____	_____
➤ Have you identified the source or process to be evaluated and the point in the process where measurements should be taken (i.e., at a point where effluents are well mixed).	_____	_____
➤ Have you determined the type of equipment and procedures to be utilized when measuring and the level of accuracy required.	_____	_____
➤ Have you ensured that the measurements to be taken are represented in both meaningful and comparable terms (e.g., parts per million or PPM) that are recognized by the intended user.	_____	_____
➤ Are results reported in terms of quantity per unit of production output to facilitate comparison?	_____	_____
➤ Are samples analyzed as soon as possible to minimize ongoing chemical reactions that may bias the results?	_____	_____
➤ Do water-borne emission concentrations comply with relevant regulations?	_____	_____
• If not, do you know why?	_____	_____
• If not, have you implemented measures to correct the situation?	_____	_____
➤ Do air-borne emission concentrations comply with relevant regulations?	_____	_____
• If not, do you know why?	_____	_____
• If not, have you implemented measures to correct the situation?	_____	_____
➤ Have you documented the equipment and procedures so that subsequent audit teams can repeat the process in the same manner? (This is the only way to permit comparison of like data.)	_____	_____

Appendix B (continued)
Environmental Audit Checklist

	Yes	No
Management Audit		
➤ Have you reviewed shipping manifests to track quantity and location of off-site disposal?	_____	_____
➤ For highly toxic or sensitive processes, have you conducted a material balance (i.e., track each unit of raw material entering a production system and account for it in terms of outputs)?	_____	_____
➤ Have you identified/projected future government requirements (e.g., regulatory changes) that may affect your operations?	_____	_____
➤ Have you assessed alternate waste reduction methods? If yes, have you considered:	_____	_____
a. Implementation costs	_____	_____
b. Level of improvement over current systems	_____	_____
c. Potential risks	_____	_____
d. Payback period	_____	_____
➤ Do you have well established procedures for dealing with environmental crises, including written and routinely updated Emergency Preparedness Plans (EPPs)?	_____	_____
➤ Do you provide regular training for employees on risk identification and mitigation?	_____	_____
➤ Do you implement "clean technologies" when options exist?	_____	_____
➤ Do you avoid mixing effluents where possible to facilitate recovery and recycling of useful substances?	_____	_____
➤ Have you adjusted your marketing strategy so that it is consistent with your environmental policies?	_____	_____
➤ Have you re-examined your insurance policies to ensure that you have adequate coverage in light of recent changes in environmental laws?	_____	_____

Appendix B (continued)
Environmental Audit Checklist

	Yes	No
Procurement Audit		
➤ Have you assessed your purchase items to see if there are any items which are unnecessary and, therefore, don't need to be purchased?	_____	_____
➤ Have your reviewed your purchases with a view to choosing the "environmentally superior" option, based on a cradle to grave analysis?	_____	_____
➤ Have you established environmental purchasing guidelines which all suppliers must comply with?	_____	_____
➤ Do you try to purchase products with recycled content whenever possible?	_____	_____
➤ Do you order supplies in bulk whenever possible to reduce packaging?	_____	_____
➤ Do you know what the proportion of post-consumer waste is in your recycled paper purchases?	_____	_____
➤ Do you research ways to reduce your purchase of disposable items (e.g., buy rechargeable batteries and refillable pens)?	_____	_____
➤ Do you discuss excess packaging with your suppliers in an effort to reduce packaging waste?	_____	_____
➤ When making capital investments in machinery and equipment do you consider the environmental implications of the materials required to run and service the equipment and how it compares to alternative pieces of equipment?	_____	_____
Real Estate Audit		
➤ Have you conducted a title search on the property extending back 50 years?	_____	_____
➤ Have you reviewed maps and photographs of the site?	_____	_____
➤ Have you reviewed geological and hydrological records for the site?	_____	_____
➤ Have you looked for and reviewed any reports that may exist on the site?	_____	_____
➤ Have you assessed the properties within a 1 km radius (or greater depending on topography) for sources of pollution that may travel to your site?	_____	_____

	Yes	No
Real Estate Audit (continued)		
➤ Have you conducted a site visit and sampled for the presence and concentration of soil and groundwater contaminants?	_____	_____
➤ Have you checked the structures for the presence of hazardous substances?	_____	_____
➤ Have you checked with local authorities to identify property set-backs, zoning, building constraints, and any forthcoming changes?	_____	_____
Waste Minimization Audit		
➤ Do you have recycling boxes in every office?	_____	_____
➤ Do you have a can and bottle recycling system in place for your staff and visitors?	_____	_____
➤ Do you compost any organic materials that may otherwise be thrown out (e.g., get staff volunteers to take home food waste for their own composters on a daily basis)?	_____	_____
➤ Have you replaced your styrofoam cups and plastic cutlery in the lunch or coffee rooms with ceramic cups and stainless steel?	_____	_____
➤ Do you purchase milk or cream for coffee in cartons or jugs rather than the small single-serving disposable containers?	_____	_____
➤ Do you write on both sides of your paper and instruct all staff to do the same?	_____	_____
➤ Do you photocopy documents on both sides of the paper and have a sign posted to instruct staff to do the same?	_____	_____
➤ Do you used the reduction feature on your photocopier where possible to avoid using larger sheets of paper or more pages?	_____	_____
➤ Do you leave a large space for messages on your fax cover sheets so that you can often avoid sending a second page?	_____	_____
➤ Do you print your fax cover sheets on the clean side of used paper?	_____	_____
➤ Have you reviewed your forms to eliminate those that are unnecessary?	_____	_____
➤ Have you contacted the nearest waste exchange to determine if potential buyers exist for your discarded materials?	_____	_____

	Yes	No
Waste Minization Audit (continued)		
➤ Do you recycle packaging materials (e.g., cardboard and wood pallets).	_____	_____
➤ Do you reuse packaging materials wherever possible to extend their useful life?	_____	_____
➤ Are you recycling all CFCs from vehicles and building refrigeration/air conditioning systems?	_____	_____
Water Conservation Audit		
➤ Have you established a water conservation program to reduce wastewater generation?	_____	_____
➤ Have you considered the possibility of closed-loop systems for planned construction of new facilities or upgrades?	_____	_____
a. It is technically feasible?	_____	_____
b. Have you conducted a cost-benefit analysis incorporating environmental costs?	_____	_____
➤ Have you installed water conserving plumbing fixtures, such as flow reducing faucet nozzles, in your buildings?	_____	_____
➤ Does your safety program include guidelines to minimize the drain disposal of chemicals?	_____	_____
➤ Do you purchase water-efficient flushing systems for new facilities and place jars of water in the holding tank of other toilets?	_____	_____
➤ If you are a large industrial concern have you installed additional water meters at various stations so that you can track and control water consumption at a "micro" level?	_____	_____
Energy Conservation Audit		
A. Internal Energy Sources		
➤ Do you replace used light bulbs with more energy efficient models?	_____	_____
➤ Do you use timers and dimmers to reduce the on-time or intensity of lights and other electrical items?	_____	_____

Appendix B (continued)
Environmental Audit Checklist

	Yes	No
A. Internal Energy Sources (continued)		
➤ Have you evaluated your light levels against recommended standards (see your electrical utility company for details) to ensure that lighting is both sufficient and not excessive?	_____	_____
➤ Do you turn off desk lights, computers and other electrical items when you leave your office?	_____	_____
➤ Do you purchase energy efficient appliances (e.g., fridges, microwaves, etc.)?	_____	_____
➤ Do you keep vehicles properly tuned up and serviced so that they are more fuel efficient?	_____	_____
➤ Have you conducted a cost-benefit analysis of switching company equipment and vehicles to cleaner fuels such as natural gas and methanol?	_____	_____
➤ Have you inspected auto emission control devices in fleet vehicles in the past twelve months?	_____	_____
➤ Have you checked for government incentives (e.g., through the B.C. Hydro Power Smart program) that may assist your company in reducing energy consumption?	_____	_____
➤ Do you schedule annual maintenance for your heating ventilation and air-conditioning (HVAC) systems and clean or replace filters on a regular (e.g., quarterly) basis?	_____	_____
➤ Have you upgraded HVAC systems, elevators, etc. with high efficiency motors?	_____	_____
➤ Have you installed heat recovery systems to warm and cool incoming air in the winter and summer, respectively, in your buildings?	_____	_____
B. External Energy Sources		
➤ Do you purchase only recycled oil for all vehicles and other machinery?	_____	_____
➤ Do you provide bus passes for your employees?	_____	_____
➤ Do you promote car pooling amongst your staff?	_____	_____

	Yes	No

B. External Energy Sources (continued)

- Do you give out free parking passes as perks to staff? (If yes, you might reconsider this practice unless they need the car on a daily basis to perform their work.) _____ _____
- Do you provide bicycle racks and showers to encourage cycling to work? _____ _____
- When travelling do you try to share taxis whenever possible? _____ _____
- When arriving at an airport do you take the airport bus instead of a taxi? _____ _____
- When possible do you arrange for a hotel which is near meeting places so that you can walk back and forth? _____ _____

Appendix C
Environment-related government assistance programs

Name of Program	Purpose	Type of Assistance	Program Administrator
Environmental Choice Program	To certify products that meet certain criteria with the Canadian "EcoLogo," a sign to consumers that the product is environmentally benign.	The complete life cycle of the product is examined against a set of criteria set by the Environmental Choice Board.	Environment Canada 107 Sparks Street 2nd Floor Ottawa, Ontario K1A 0H3 Tel: (613) 952-9463 Fax: (613) 952-9465
Environmental Partners Fund	To help local groups take action in protecting, preserving, enhancing and restoring the environment at the community level.	Projects funded are of two types: clean-ups that restore and conserve, and waste-recycling and waste-reduction initiatives. Only non-profit groups are eligible.	Contact your regional office of Environment Canada.
DRECT Program	To aid private industry and provincial and municipal authorities to seek new ways to recover, recycle, reuse or reduce waste.	Through DRECT, the federal government shares the costs of developing and demonstrating proto-type systems of promising new environmental technologies.	Technical Services Branch Environmental Protection Service Environment Canada Ottawa, Ontario K1A 1C8 Tel: (819) 997-3405
Business-Environment Success Stories Bank	To collect stories about how business is moving toward sustainable development.	Provides examples that may be of use to your business.	Sustainable Development Branch Environment Canada Place Vincent Massey 351 St. Joseph Blvd. Hull, Quebec K1A 0H3

Appendix C
Environment-related government assistance programs

Name of Program	Purpose	Type of Assistance	Program Administrator
Western Diversification Program	To assist individuals and organizations whose projects would contribute to the economic diversification of Western Canada.	Financial assistance includes loan guarantees and repayable and non-repayable contributions. It encom-passes all sectors except retail sales and personal, social and financial services.	Western Economic Diversification Cornerpoint Building 10179 - 105th Street Room 604 Edmonton, Alberta T5J 3N1 Tel: (403) 495-4164
The Atlantic Canada Opportunities Agency (ACOA) Action Program	To assist individuals and organizations whose projects would contribute to the economy of Atlantic Canada.	Offers assistance in seven main areas: loan insurance, interest buy-downs, business support, studies, innovation assistance, new facility establishment and expansion/modernization/new product expansion.	ACOA Head Office T10 Main Street, 10th Floor Moncton, New Brunswick E1C 9J8 Tel: 1-800-561-7862
Research Partnerships Program	To accelerate partnerships among Canadian universities, federal government departments and industry.	Helps companies locate university-based expertise and makes substantial contributions to the cost of industrially-relevant research conducted by universities.	Natural Sciences and Engineering Research Council 200 Kent Street Ottawa, Ontario K1A 1H5 Tel: (613) 995-6295
Patent Information Exploitation Program (PIE)	To stimulate technology transfer, promote industrial innovation, and provide research and development support through the exploitation of technological information contained in patents.	Offers a state-of-the-art patent search service to small and medium-sized businesses, research establishments and government agencies.	Intellectual Property Directorate Information and Technology Exploitation Branch Consumer and Corporate Affairs Canada Place du Portage Hull, Quebec K1A 0C9 Tel: (819) 997-1936

Appendix C
Environment-related government assistance programs

Name of Program	Purpose	Type of Assistance	Program Administrator
Canada Institute for Scientific and Technical Information (CISTI)	To provide scientific and technical literature through loans and photo-copying services to businesses of all sizes.	Offers one of the most comprehensive libraries of scientific and technical literature in the world. An excellent source of environment-related information.	CISTI National Research Council Montreal Road Building M-55 Ottawa, Ontario K1A 0R6 Tel: (613) 993-160
Energy Programs	To promote the development of products, processes or systems that will increase the efficiency of energy use throughout industry and to encourage the use of the technology developed under the program.	Offers support of up to 50% of eligible costs of projects to Canadian companies, individuals, trade and research organizations, and consulting firms.	Energy Efficiency Technology Division Technology Branch Energy, Mines and Resources Canada Ottawa, Ontario K1A 0E4 Tel: (613) 996-2480
Technology Inflow Program (TIP)	To promote the acquisition of foreign technologies useful for developing new or improved Canadian products, processes or services.	Provides financial support to help Canadian industry acquire foreign technologies relevant to improving competitiveness and expanding operations.	External Affairs and International Trade Canada Lester B. Pearson Building 125 Sussex Drive Ottawa, Ontario K1A 0G2 Tel: (613) 996-0971

Appendix D
Government and non-profitorganizations concerned with business and the environment in Canada

Name of Organization	Contact Information	Description
Federal Government National Round Table on the Environment and the Economy	1 Nicholas Street, Suite 250 Ottawa, Ontario K1N 7B7 Phone: (613) 992-7189 Fax: (613) 992-7385	Representatives from the political level of governments, the corporate sector, academic and research institutes, the scientific community and a variety of public interest and professional groups meet regularly to attempt to reach a consensus on methods of dealing with environmental issues.
Industry, Science and Technology Canada (ISTC) Environment Industries and Project Division	235 Queen Street Ottawa, Ontario K1A 0H5 Tel: (613) 954-3216 Fax: (613) 954-3430	ISTC works to build communication between government, industry and the scientific community. The Environment Industries and Projects Division assists in technology transfers from research institutions to businesses. While no specific funding programs have been established for environmental initiatives, new technology or other measures planned by companies may be eligible for funding under current programs.
Environment Canada	Inquiries Centre Ottawa, Ontario K1A 0H3 Tel: (613) 997-2800 Fax: (613) 953-8125	This government department deals with most issues relating to the environment, including research, regulations and compliance programs. Four programs that are of interest to business are described in Appendix C.
Western Economic Diversification	Cornerpoint Building 10179 - 105th Street, Room 604 Edmonton, Alberta T5J 3N1 Tel: (403) 495-4164	WD offers a variety of support mechanisms, ranging from small business assistance to large systematic industry-wide programs. The Western Diversification Program is particularly targeted toward projects that involve new products, new markets and new technologies and may be of interest to Western-based companies seeking to make environment-related innovations.
The Atlantic Canada Opportunities Agency (ACOA)	ACOA Head Office 770 Main Street, 10th Floor Moncton, New Brunswick E1C 9J8 Tel: 1-800-561-7862	ACOA offers assistance adapted to the special needs of Atlantic Canada. The ACOA Action Program offers aid in loan insurance, interest buy-downs, business support, studies, innovation assistance, new facility establishment and expansion/modernization, new product expansion.

Appendix D (continued)
Government and non-profitorganizations concerned with business and the environment in Canada

Name of Organization	Contact Information	Description
National Research Council of Canada	Building M-58 Montreal Road Ottawa, Ontario K1A 0R6 Tel: (613) 993-3041	As Canada's leading science and technology agency, the NRC helps Canadian firms improve productivity, develop new products, and solve technical problems. NRC assistance may be of help to those conducting research and development work relating to environmental improvements.
Business/Industry Associations		
Canadian Chamber of Commerce	Suite 1160 55 Metcalfe Street Ottawa, Ontario K1P 6N4 Tel: (613) 238-4000 Fax: (613) 238-7643	The Canadian Chamber of Commerce is the nation's largest business association and is dedicated to the promotion and development of a strong and healthy economy. The Chamber has undertaken a variety of environmental initiatives and has compiled a comprehensive environmental action plan for the 1990s.
Business Council on National Issues	#806 Royal Bank Centre 90 Sparks Street Ottawa, Ontario K1P 5B4 Tel: (613) 238-3727	The BCNI represents the 150 largest corporations in Canada. It has a strong focus on environmental issues. It informs its members about environmental management strategies and makes policy recommendations to government on how business can meet its environmental obligation while ensuring economic prosperity.
Canadian Environment Industry Association	Suite 200 - 1130 West Pender St. Vancouver, B.C. V6E 4A4 Tel: (604) 687-7001 Fax: (604) 681-6825	The CEIA is a national organization that promotes the interests of Canadian businesses involved in the supply of services and products to protect, analyze or rehabilitate the natural environment.

Appendix D (continued)
Government and non-profitorganizations concerned with business and the environment in Canada

Name of Organization	Contact Information	Description
Research/Policy Organizations		
Institute for Research on Public Policy	5th floor, 275 Slater Street Ottawa, Ontario K1P 5H9 Tel: (613) 238-2296 Fax: (613) 235-8237	The IRPP is mandated to improve public policy in Canada by promoting and contributing to a policy process that is broadly based, informed and effective. It has an environment and sustainable development group that focuses primarily on international trade and the environment.
Science Council of Canada	100 Metcalfe Street Ottawa, Ontario K1P 5M1 Tel: (613) 996-2822	The Science Council of Canada is the national advisory on science and technology policy issues. As a Crown corporation, it operates at arms-length with the federal government.
International Institute for Sustainable Development	212 McDermot Winnipeg, Manitoba R3B 0S3 Tel: (204) 945-0985	The Institute conducts research in the areas of sustainable development policy, reform, integration of environmental and economic forces, and institutional changes associated with new sustainable development policies. The Institute also provides practical applications through promotions and education. Operating as an independent body, the Institute is funded jointly by the Canadian and Manitoba governments.
Harmony Foundation	P.O. Box 4016 Station C Ottawa, Ontario K1Y 4P2 Phone: (613) 230-7353	A non-profit foundation dedicated to improving environmental education to all sectors of Canadian society.
Conference Board of Canada	255 Smyth Road Ottawa, Ontario K1H 8M7 Phone: (613) 526-3280 Fax: (613) 526-4857	An independent, non-profit research institution that conducts studies of management policies and practices, public issues, and the economic situation. The Conference Board recently established a Business and the Environment research program. It focuses on the economic, managerial, and public policy aspects of environmental issues.

Appendix D (continued)
Government and non-profitorganizations concerned with business and the environment in Canada

Name of Organization	Contact Information	Description
Interest Groups		
Canadian Environmental Network	P.O. Box 1289 Station B Ottawa Ontario Phone: (613) 563-2078 Fax: (613) 232-4354	Network of all environmental organizations in Canada. Based in Ottawa, the group has published the "Canadian Environmental Network," which lists 1,800 environmental groups located across Canada. The publication is available for a small fee and may also be found in most large public libraries.
Pollution Probe	12 Madison Avenue Toronto, Ontario M5R 2S1 Phone: (416) 926-1907 Fax: (416) 926-1601	Pollution Probe is a Canadian organization founded in 1969 in response to growing public concern over the deteriorating quality of the Canadian environment. The group researches issues, provides public education and advocates environmentally responsible public policy.
Friends of the Earth	701 - 215 Laurier Street West Ottawa, Ontario K1P 5J6 Phone: (613) 287-6144 Fax: (613) 232-4354	This is an international environmental group that maintains one office in Ottawa. Issues of primary interest to Friends of the Earth are: global warming; ozone depletion; and agriculture and food. The group researches environmental issues and has published several books in order to raise awareness of environmental problems. Friends of the Earth are pleased to answer questions posed by business and the public.

Appendix E
Suggested reading list on business and the environment

Name	Contact Information	Description
Periodicals		
EcoSource	Box 1270 Guelph, Ontario N1H 6N6 Phone: (519) 763-8888 Fax: (519) 763-6202	Provides an environmental intelligence report edited for professionals. A concise overview of relevant environ-mental news and opinions is presented.
Ecological Economics	Elsevier Science Publishers Journal Information Centre 655 Avenue of the Americas New York, N.Y. U.S.A. 10010	Provides information on the integration of ecology and economics. Includes an international perspective on many issues including valuation of natural resources, renewable resource management, methods of implementing efficient environmental policies, etc.
Enviroline	1411 6A Street Northwest Calgary, Alberta T2M 3G8 Phone: (403) 289-0390 Fax: (403) 282-6632	Provides a compendium of environmental news plus reviews of new policies directed primarily to forestry and energy sectors.
Environmental Eye	Businesstek Publishing Inc. P.O. Box 1125, Station H Nepean, Ontario K2H 7T8 Phone: (613) 825-5939	Reports trends that threaten to change the status quo between business and the environment. News and views on corporate greening are also provided.
Materials & Energy Advantage	Evert Communications Ltd. P.O. Box 3158, 982 Wellington St. Ottawa, Ontario	Provides updates on innovations by government and industry on physical plant operation, production, handling, packaging, transport and retailing in all sectors of the economy.

Appendix E (continued)
Suggested reading list on business and the environment

Name	Contact Information	Description
Eco-Log Week	Corpus Information Services 1450 Don Mills Road Don Mills, Ontario M3B 2X7 Phone: (416) 442-2122 Fax: (416) 442-2200	Presents summaries and reviews on pollution control technology, industrial waste management issues, regulatory programs, plus funding and contract information
Environmental Digest	Sydenham Publishing 459 - 13th Street, West Owen Sound, Ontario N4K 3W8 Phone: (519) 371-6289	Provides concise summaries of environmental news, trends and developments in twelve subject areas including recycling, energy conservation, environmental law, new technologies, and so on.
Sustainable Development	Sustainable Development Canadian Wildlife Service Environment Canada Ottawa, Ontario K1A 0H3 Phone: (819) 953-1448	Provides a discussion of a broad range of environmental issues that affect Canada and Canadians.
Books and Publications		
Our Common Future	World Commission on Environment and Development (Bruntland Commission) Oxford University Press 1987	Presents a global overview of the state of the natural environment and what needs to be done to correct the situation.
The Green Capitalists	Elkington, John and T. Burke Victor Gollancz Ltd. London, England 1989	Provides a pro-active discussion on what companies can do to improve their environmental performance. A number of case studies are also presented.

Appendix E (continued)
Suggested reading list on business and the environment

Name	Contact Information	Description
The Environmental Imperative: Market Approaches to the Greening of Canada	Doern, G. Bruce C.D. Howe Institute	Provides a compendium of papers presented at a conference on "Environmental Policy and the Energy Industries in Alberta," held in Calgary, Alberta in January, 1990. The focus is on policies that support market driven efforts to improve the environment.
The Market and the Environment	The Conference Board of Canada 255 Smyth Road Ottawa, Ontario K1H 8M7 Phone: (613) 526-3280 Fax: (613) 526-4857	Provides a discussion of the potential and the mechanisms of market-based instruments for fulfilling environmental goals. Written for government and business.
Achieving Environmental Excellence: for Canadian Business	The Canadian Chamber of Commerce 55 Metcalfe Street Ottawa, Ontario K1P 6N4 Phone: (613) 238-4000 Fax: (613) 238-7643	Provides case studies on environmentally pro-active companies plus a guide to developing a corporate environmental strategy.
National Round Table on the Environment and the Economy: A Report to Canadians, June 1989-1990	National Round Table on the Environment and the Economy 520 - 1 Nicholas Street Ottawa, Ontario K1N 7B7 Phone: (613) 992-7189 Fax: (613) 992-7385	Presents the first report of the National Round Table. The current status and barriers to achieving sustainable development are discussed, along with new initiatives.

Appendix E (continued)
Suggested reading list on business and the environment

Name	Contact Information	Description
After the Crash: The Emergence of the Rainbow Economy	Guy Dauncey 2069 Kings Road Victoria, B.C. V8R 2P6 Phone: (604) 592-4472 (home) (604) 592-4473 (office)	Describes alternative approaches to business, banking, investment, community economic development, and ecological sustainability in many nationals, all pointing toward the possibility of a more sustainable mode of existence.
Environmental Dimensions	Temple Scott Associates Inc. 8 York Street, 2nd Floor Ottawa, Ontario K1N 5S6 Phone: (613) 232-2080 Fax: (613) 232-4109	Presents news, analysis and trends impacting Canadian environmental policy in newsletter format. Further information is available in a longer publication entitled ED Reports.
Environment and Development	Canadian International Development Agency (CIDA) 200 Promenade du Portage 7th Floor Hull, Quebec K1A 0G4 Tel: (819) 3411	Presents the CIDA's policy statement on the environment, focusing on preventing further global environmental destruction and on promoting development projects that will enhance the environment in the long run.
Environmental Peacekeepers: Science, Technology and Sustainable Development in Canada	Publications Office Science Council of Canada 100 Metcalfe Street Ottawa, Ontario K1P 5M1 Phone: (613) 992-1142	Recommends ways in which the Canadian government, and in particular the science and technology sector, can reconcile the seemingly conflicting goals of environmental protection and economic growth.
Economics and the Environment: A Reconciliation	The Fraser Institute 626 Bute Street Vancouver, B.C. V6E 3M1	Presents a case for translating environmentalist's goals into workable economic solutions.

Appendix E (continued)
Suggested reading list on business and the environment

Name	Contact Information	Description
Canadian Waste Materials Exchange	Ortech International 2395 Speakman Drive Mississauga, Ontario L5K 1B3 Phone: (416) 822-4111 Fax: (416) 823-1446	Provides a bulletin of by-product and surplus material listings from organizations across Canada. Waste materials are listed at no charge.
Success Stories Handbook	State of the Environment Reporting Environment Canada Hull, Quebec K1A 0H3 Phone: (819) 953-1440 Fax: (819) 953-3992	Provides a collection of case studies of innovative environmental action undertaken by business and government in support of sustainable development.
Directories		
Canadian Environmental Directory 1991	Canadian Almanac Directory Publishing Company Ltd. #207, 134 Adelaide St. East Toronto, Ontario M5C 1K9 Phone: (416) 362-4088 Fax: (416) 362-4181	Provides a national directory drawing together the network of individuals, agencies, firms and associations active in environment-related activities. Also provides information, services, conferences, events, eco-consultants, and a resource management buyers guide.
World Environment Directory: Standard Environmental Reference	Business Publishers Inc. Silver Spring Maryland, U.S.A.	Provides a list of companies and individuals involved in environmental activities across North America.